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RESULTS OF RCRA CA-725 ENVIRONMENTAL INDICATORS AIR QUALITY SAMPLING

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1.0 INTRODUCTION

TRC Environmental Corporation, under contract with Solutia, Inc., performed an air quality sampling program at Solutia's W.G. Krummrich plant in Sauget, Illinois to facilitate the completion of the Resource Conservation and Recovery Act (RCRA) Human Exposure Environmental Indicators (EI) report (CA-725). The sampling followed a field-sampling plan (FSP) presented initially in December 2002 and modified on March 28, 2003 based upon U. S. Environmental Protection Agency (EPA) Region V comments and suggestions made at several on-site meetings. A copy of the final sampling plan is included as Attachment A.

Samples of air were collected at four buildings on the W.G. Krummrich plant site in both March and September 2003. Samples of soil vapors were collected at sixteen locations on the W.G Krummrich plant site in March - April and at eight locations in August 2003. Additionally on April 5, 2003, four off-site soil vapor locations were sampled. This report discusses the results of those samples and compares them to the EPA "Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils" (Draft Guidance) (67 FR 71169) and to Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PELs). However, the comparison to the target indoor air concentrations given in the Draft Guidance is not considered to be the appropriate measure of risk evaluation in this case. The Draft Guidance document notes that "...EPA does not expect this Draft Guidance to be used in settings that are primarily occupational." It further notes that "OSHA and EPA have agreed that OSHA generally will take the lead role in addressing occupational exposures." Consequently, the OSHA PELs are considered to be more appropriate for evaluating worker risks arising from exposure to both indoor and outdoor air in an industrial environment. Moreover, the target indoor air concentrations listed in Table 2 of the Draft Guidance document are based on application of a model in which the receptors are residents in homes. Thus, the target concentrations in Table 2 of the Draft Guidance document are more applicable to a residential exposure than to an occupational scenario.

To satisfy the requirements of the RCRA CA-725 process, the evaluations need to include all the pathways for human exposure from a potential underground source. Human exposure at the workplace is an end point of the air pathway, which this sampling seeks to define. This pathway starts with volatilization or partitioning of constituents from the dissolved plume in ground water below the site. Those constituents are then present as vapors in the soil. An extensive soil vapor sampling program that included simultaneous indoor/outdoor sampling

was conducted in and around specific buildings to determine if vapors from the ground water plume are present in the soil and if a potential human exposure pathway was "complete". If vapors from the ground water occur in the soil, the pathway continues through the migration of those vapors to the buildings in which people work. Thus, it is the purpose of this sampling to determine whether such a pathway exists and, if so, to what extent any measurable indoor concentrations are due to this pathway or to other sources. It is important to recognize that sources from the outdoor environment and from within the building can also impact ambient indoor air quality. These other sources are independent of the potential underground sources.

2.0 INDOOR AIR QUALITY SAMPLING

Samples were collected at the following four buildings on the W.G. Krummrich plant site (the building locations are shown on the map in Attachment B):

- BBZ - Storeroom
- BBG – West Shop
- CCB – East Shop
- BK – Administration Building.

These buildings were selected because plant personnel were assigned to these buildings to perform administrative functions (office work) and the buildings are not closed and designed with high volume air exchange systems. This design, which is used at the operations control buildings at the plant, minimizes migration of soil vapors into interior air spaces.

Indoor air samples were collected on March 29, 2003, when the buildings were being heated. Ambient temperatures during the indoor air sampling ranged from 41° - 46°F with strong winds from the northwest direction. Qualitative airflow measurements at exterior doorways confirmed that the buildings sampled were under negative pressure, the expected result in the heating season.

The buildings were re-sampled on September 6, 2003. Ambient temperatures were in the high 70's, but only the Administration Building BK was being air-conditioned. Winds were light and from the east. The offices in Building BBZ were under negative pressure but the other three buildings were under positive pressure.

Samples were collected indoors over 8-hour periods in the buildings at locations within the breathing zones of workers. The 8-hour sampling period was selected to be consistent with the OSHA PELs. Over an 8-hour period, the variability in air quality caused by layout patterns, airflows and currents, and occupancy within the building will be accounted for and, in consequence, multiple samples within each building are not necessary. For three buildings, a sample was also taken simultaneously at the fresh air intake; at the fourth building (BBZ), a sample was collected at the air intake to the office area. This was necessary to differentiate between sources related to interior operations, ambient exterior air, and soil vapors. The sampling occurred during the weekend day shift to minimize the disturbance to the personnel working in the area and to obtain samples not affected by normal workday activities. By sampling during the weekend day shift, the possibility of sample contamination from another source (workers clothes and shoes) was reduced.

Samples were analyzed using EPA Method TO-15 for the analysis of a list of target volatile organic compounds (VOCs), while Method TO-13 was used for semi-volatile organic compounds. The results are summarized in Table 2-1, and the laboratory reports are presented in Attachment C. Table 2-1 also shows the OSHA PEL concentrations and the EPA target indoor concentrations. None of the results were above the OSHA Permissible Exposure Limits (PELs). Air concentrations for two of the target VOCs were above the EPA target indoor concentrations at only two locations. The EPA target indoor concentrations listed in this table were taken from Table 2a of the Draft Guidance.

It is emphasized that Table 2-1 only contains the compounds that were detected in the samples. All other target compounds not listed in this table were not detected. A description of the results in each building is presented below.

Building BBZ - Storeroom

This building is primarily a warehouse with offices and some small production areas. The offices chosen for sampling have a ceiling-mounted air handling system that draws and conditions air from inside the warehouse. In March, inside the offices, (sample BBZ-O), acetone, methyl ethyl ketone (MEK), and methylene chloride were detected at concentrations well below the target indoor air levels and the OSHA PELs. These compounds were also detected in the air intakes from the warehouse to the offices (sample BBZ-I). The other compound detected, 4-methyl-2-pentanone (methyl isobutyl ketone or MIBK) was detected at a concentration above the target indoor air concentration listed in the Subsurface Vapor Intrusion Guidance, but orders of magnitude below the OSHA PEL. As with MEK, a slightly higher concentration was measured at the air intake to the offices.

Table 2-1:
Indoor/Outdoor Air Sampling Results (in ppbv)
Date of Sampling: March 29, 2003 and September 6, 2003
Method TO-15

Compounds Detected	USEPA Target Indoor Concen-tration (ppbv)*	OSHA PEL (ppbv)	Detection Limit (ppbv)	Building BBZ				Building BBG				Building CCB				Building BK Administration					
				Offices		Warehouse		Indoors		Outdoor Air at Bldg. Intake		Indoors		Outdoor Air at Bldg. Intake		Indoors 1st Floor		Indoors Basement		Outdoor Air at Bldg. Intake	
Sample No. (abbreviated)				*BBZ-O*		*BBZ-I*		*BBG-O*		*BBG-I*		*CCB-O*		*CCB-I*		*BK-1st*		*BK-Dist*		*BK-I*	
Method TO-15 Results				Mar	Sep	Mar	Sep	Mar	Sep	Mar	Sep	Mar	Sep	Mar	Sep	Mar	Sep	Mar	Sep	Mar	Sep
Acetone	150	100,000	3.4	7.4	14	5.2	6.2	110	5.6	ND	3.7	20	21	3.4	ND	4.4	6.0	4	6.2	4.5	ND
Benzene	9.8	1,000	0.86	ND	1.3	ND	ND	0.86	ND	ND	ND	ND	1.0	0.92	ND	ND	0.84	ND	ND	ND	ND
Chlorobenzene	13	75,000	0.86	ND	9.2	ND	5.7	0.86	42	ND	43	1.6	ND	1.0	ND	ND	3.3	ND	3.1	0.94	1.9
1,2-Dichlorobenzene	33	25,000	0.86	ND	ND	ND	ND	ND	1.1	ND	1.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	130	10,000	0.86	ND	ND	ND	ND	ND	ND	ND	0.93	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Ethyl Ketone (2-butanone, MEK)	340	100,000	3.4	20	7.7	22	4.7	21	ND	9.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone (methyl isobutyl ketone, MIBK)	20	200,000	3.4	130	86	160	78	5.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	150	25,000	0.86	60	20	25	7.4	87	1.8	ND	1.5	440	48	3.1	1.0	13	12	24	6.2	2.2	1.6
1,1,1-Trichloroethane	400	100,000	0.86	ND	1.2	ND	ND	ND	ND	ND	1.0	ND	ND	ND	ND	ND	0.86	ND	ND	ND	ND

No semi-volatiles were detected in the Method TO-13 analyses,
"Mar" means data collected on March 9, 2003 and "Sep" means data collected on September 6, 2003
"ND" indicates not detected (detection limits are below the US EPA target concentrations)
* EPA Draft Soil Vapor Intrusion Guidance Table 2A

In September, inside the offices (sample BBZ-O), acetone, benzene, chlorobenzene, MEK, methylene chloride, and 1,1,1-trichloroethane were detected at concentrations below or well below both the target indoor air levels and the OSHA PELs. The concentrations of two of these compounds (benzene and 1,1,1-trichloroethane) were very close to the detection limit.

MIBK was again detected at a concentration above the target indoor concentration, but well below the OSHA PEL. As in March, the intake air to the offices (sample BBZ-I) also contained MIBK. However, the concentrations in the offices in September were about half those measured in March, despite the warmer weather. This suggests that the BBZ Building may be better ventilated in September than in March because of open doors and windows. In both seasons the offices were at negative pressure and would thus reflect the warehouse air more easily.

Thus, it can be concluded that the MIBK found in Building BBZ offices most likely came from sources within in the warehouse. It should be noted that over a million pounds of product is stored in the storeroom and that the offices are used by personnel from the nearby manufacturing areas. Therefore, there is continuous traffic into and out of the office areas. Further, all personnel who work in this area have undergone hazard awareness training and are familiar with the hazards of the workplace.

Building BBG – West Shop

The March indoor air sample from Building BBG (sample BBG-O) contained the following compounds:

- Acetone
- Benzene
- Chlorobenzene
- Methylene Chloride
- MEK
- MIBK

The concentrations of benzene and chlorobenzene were at the detection threshold and well below the target concentrations. The concentrations of acetone, MIBK, MEK and methylene chloride were all below target indoor concentrations and the OSHA PELs. . MEK was detected in the intake air sample, however no other compounds were detected in the building intake sample.

In September, the BBG indoor sample (sample BBG-O) provided a very different picture. Benzene, MEK or MIBK were not detected. The concentrations of acetone and methylene chloride were substantially lower, and it is clear that these compounds were in the intake air (sample BBG-I) in similar concentrations. Chlorobenzene concentrations were substantially higher, but a very similar concentration was reported in the intake air. Similarly, 1,2-dichlorobenzene was reported in the indoor air sample at a slightly higher concentration than in the intake sample. The intake air did contain 1,1,1-trichloroethane and 1,4-dichlorobenzene at near the detection limit, but these compounds were not detected in the indoor sample.

No measurements in the BBG Building are above the OSHA PELs and only one, chlorobenzene, is above the EPA target indoor concentrations; however, that chlorobenzene was clearly associated with the intake air. In fact, the concentrations reported in the September sample in Building BBG are reflective of the intake air quality.

Building CCB - East Shop

In March, the indoor air sample (sample CCB-O) at this building contained methylene chloride above the target indoor air concentration, but almost two orders of magnitude below the OSHA PEL. There was also a trace concentration of methylene chloride in the intake air (sample CCB-I), suggesting an outdoor air source was partly responsible. There were also low concentrations of chlorobenzene and acetone in the indoor sample, but these compounds were also in the intake air suggesting that ambient air is at least a partial source. Benzene was found in concentrations near the detection limit in the intake air, but not inside the building.

In September, methylene chloride was again found in the indoor sample (sample CCB-O), but in lower concentrations than in March and below both the target indoor concentrations and the OSHA PEL. As in March, there was detectable methylene chloride in the intake air (sample CCB-I), although at a significantly lower concentration as compared to the indoor air. Acetone and benzene were also found indoors. The reported acetone concentration was below both the target indoor air concentration and the PEL. The reported benzene concentration was slightly above the method detection limit, but well below the target indoor air concentration and PEL.

Benzene and chlorobenzene were detected at trace concentrations and, based upon outdoor ambient air sample results, most likely originate from intake air. Acetone and methylene chloride do not appear to be wholly attributable to intake air. Methylene chloride has been

commonly used as a degreaser in shop areas within the building. Hence, it would not be surprising to detect it in indoor air at low concentrations.

BK Administration Building

During both sampling events, two samples were collected indoors at worker breathing zones in Building BK, one on the first floor (sample BK-1st) and one in the basement (sample BK-Dist). In March, methylene chloride and acetone (the only target compounds detected) were detected at concentrations below the indoor air target concentrations and the OSHA PELs. Acetone was detected at a similar concentration in the intake air to the building; methylene chloride was also detected in the intake air at a concentration less than the concentration in the indoor air sample. Chlorobenzene was found in the intake air (sample BK-I) at concentrations near the detection limit in March. However, chlorobenzene was not found in the building air in March.

In September, traces of five compounds (acetone, benzene, chlorobenzene, methylene chloride and 1,1,1-trichloroethane) were found on the first floor air sample (sample BK-1st) and traces of acetone, chlorobenzene, and methylene chloride were found in the basement air sample (sample BK-Dist). Chlorobenzene and methylene chloride were found in the intake air (Sample BK-I).

These data show that there were no compounds detected in the BK Building above either the target indoor concentrations or the OSHA PELs. All, or the majority, of those compounds detected can be attributed to either the intake air or originate from indoor sources.

Ambient Air Samples

Ambient air samples were taken simultaneously with soil vapor sampling, i.e., on the same dates and time specific to the soil vapor samples. These samples are to permit correlation with the soil vapor samples collected at the same time and to evaluate the ambient air quality at the plant site. The samples showed small concentrations of chlorobenzene, 1,4-dichlorobenzene, acetone, methylene chloride, and 1,1,1-trichloroethane. Acetone was detected in all but one of the samples. Table 2-2 shows these sample results. These samples confirm that these compounds are occasionally present at detectable concentrations in the general ambient air.

Table 2-2A:
March - April Ambient Air Sampling Results (ppbv)

Method TO-15	Target Indoor Concentration	OSHA PEL	Detection Limit	Sampling Dates (Sample Number)			
				March 31, 2003 (Location SVP-9) (3:00 PM)	April 1, 2003 (Location SVP-17) (9:00 AM)	April 1, 2003 (Location SVP-1) (1:00 PM)	April 2, 2003 (Location SVP-1) (1:00 PM)
Acetone	150	100,000	3.8	ND	4.7	4.1	19
Chlorobenzene	13	75,000	0.96	ND	2.6	ND	ND
1,4-Dichlorobenzene	130	10,000	6.96	ND	1.5	ND	ND
Methylene Chloride	150	25,000	0.98	ND	ND	ND	7.6
1,1,1-Trichloroethane	0.04	100,000	0.86	ND	ND	ND	ND

Table 2-2B:
August Ambient Air Sampling Results (ppbv)

Method TO-15	Target Indoor Concentration	OSHA PEL	Detection Limit	Sampling Dates (Sample Number)			
				August 19, 2003 (Location SVP-3) (12:00 PM)	August 20, 2003 (Location SVP-13A) (9:00 AM)	August 20, 2003 (Location SVP-23) (1:00 PM)	August 21, 2003 (Location SVP-17A) (8:00AM)
Acetone	150	100,000	3.8	8.9	7.7	7.7	13
Chlorobenzene	13	75,000	0.96	ND	17	ND	ND
1,4-Dichlorobenzene	130	10,000	0.86	ND	ND	3.2	ND
Methylene Chloride	150	25,000	0.98	ND	ND	3.9	ND
1,1,1-Trichloroethane	0.04	100,000	0.86	ND	3.3	ND	ND

"ND" represents not detected (detection limits are below target concentrations).

However, with the exception of chlorobenzene in the August sampling event, the concentrations are well below both the target indoor air levels defined in the Draft Guidance and the OSHA PELs. The concentration of chlorobenzene at one sampling location in August marginally exceeded the target air concentration, but was more than three orders of magnitude less than the OSHA PEL.

These ambient data show a mixture of trace concentrations coming both from the plant site and from off site directions. Comparisons to soil vapor concentrations are discussed in Section 4.3.

2.1 Summary of the Indoor Air Sampling Results

With only three exceptions, the samples taken indoors in the four buildings contained constituents at concentrations below both the EPA target concentrations for indoor air, as well as the OSHA PEL.

1. Methylene chloride was found above the target indoor concentration, but well below the OSHA PEL in March in the CCB Building, but was lower and below the target indoor concentrations in September. Methylene chloride was also found at trace concentrations in all but one of the indoor and air intake samples and in two of the ambient air samples. It thus appears to be present in the plant site's ambient air at concentrations below any level of concern.
2. Chlorobenzene was found in the BBG Building in September at concentrations above the target indoor air concentration, but below the OSHA PEL. The air intake at Building BBG had the same concentration of chlorobenzene. Chlorobenzene was present in all but two building indoor and air intake samples and one ambient sample in September. It appears to be present at low concentrations in the plant site's ambient air.
3. MIBK was found in both March and September at the BBZ offices inside the warehouse. The concentrations were above the target indoor concentrations, but well below the OSHA PEL. The concentrations in September were about half of those in March. At both times, the concentrations in the intake to the offices were similar to the concentrations in the office and thus, the source is the warehouse itself, not the groundwater under the building. MIBK was not detected in the ambient air samples.

In summary, although the indoor air in three sampled cases exceeded the target indoor air

concentrations defined for a residential exposure scenario by the EPA Subsurface Vapor Intrusion Guidance, the concentrations were well below the applicable OSHA PELs, which are considered to be the appropriate comparative standard.

Further, the compounds detected in the buildings did not appear to be the result of volatilization from shallow ground water (see Section 4). Rather, the source(s) of these compounds appear(s) to be the indoor and/or outdoor ambient air and, possibly, product stored within the buildings themselves.

3.0 SOIL VAPOR SAMPLING

A total of 23 soil vapor locations were sampled. Of these, 18 were probes installed on the plant and selected specifically for the purpose of determining the soil vapor concentrations that might result in vapor intrusion into buildings. The other five were grab samples, one taken on site and four taken off site along the benzene pipeline that runs from the plant toward the river to determine if the pipeline was a potential source of benzene leakage.

3.1 In Plant Soil Vapor Sampling

Seventeen soil vapor probes (SVP-1 through SVP-17) were installed in March at the approximate locations shown on the map in Attachment B. Although sampling was attempted in March - April at all locations, two locations (SVP-7 and SVP-13) could not be sampled due to saturated conditions on the date of sampling.

In August, those two locations and one additional location (SVP-17) were still saturated and new, shallower probes were installed so that those locations could be sampled. In addition, probe SVP-23 was added near Building BBG. All of these new installations, together with four of the probes installed in March, were sampled in August The reduced number of sampling locations in August was agreed to at a meting held with EPA on August 18, 2003.

Table 3-1 summarizes the construction details for the soil vapor sample collection probes. One probe, SVP-6, installed immediately adjacent to the BK Administration Building, was placed at a depth of 12 feet below ground surface (bgs) because the BK Building has a basement. Others were installed to depths below 5 feet bgs, except where water or other conditions (e.g., clay) made a shallower installation more appropriate.

The analytical results for both sampling events are summarized in Table 3-2 and the laboratory reports are presented in Attachment C. Overall, fourteen target VOCs were detected using Method TO-15; only two semi-volatile organic compounds (SVOCs) were detected using Method TO-13. The target shallow soil gas concentrations from the EPA's Subsurface Vapor Intrusion Guidance document as well as the OSHA PELs are also listed in Table 3-2 next to the detected compounds. These target concentrations are considered to be screening levels for the potential for intrusion of the specific compounds into overlying or immediately adjacent buildings. However, it is emphasized that the screening is only relevant as an indicator of the possible intrusion into adjacent buildings. If no buildings are in the immediate vicinity of the sample location, or if sampling in an adjacent building does not result in the detection of the

Table 3-1
SOIL GAS SAMPLING POINT CONSTRUCTION SUMMARY
SOLUTIA - SAUGET, ILLINOIS
MARCH and AUGUST, 2003

Soil Gas Sampling Location ID	SVP-1	SVP-2	SVP-3	SVP-4	SVP-5	SVP-6	SVP-7	SVP-8	SVP-9	SVP-10	SVP-11	SVP-12	SVP-13	SVP-14	SVP-15	SVP-16	SVP-17	SVP-7A	SVP-13A	SVP-17A	SVP-23
Date of Installation	3/20/2003	3/20/2003	3/20/2003	3/20/2003	3/20/2003	3/20/2003	3/20/2003	3/20/2003	3/21/2003	3/21/2003	3/21/2003	3/21/2003	3/21/2003	3/21/2003	3/21/2003	3/21/2003	3/21/2003	8/19/2003	8/19/2003	8/19/2003	8/19/2003
Type of Protective Cover	Stick up	Stick up	Stick up	Stick up	Road Box	Road Box	Road Box	Road Box	Road Box	Road Box	Road Box	Road Box	Road Box	Road Box	Road Box	Road Box	Road Box	Road Box	Road Box	Road Box	Road Box
(All units in feet below grade)																					
Total Boring Depth	6.1	6.1	6	6.1	6.1	12	5.5	5.5	4.8*	6.5	6.1	6.1	5*	5.5	6.2	5*	5**	4.2	4*	4*	6
Depth Interval of Bentonite Seal	0 - 5.3	0 - 5.3	0 - 5	0 - 4.8	0.5 - 5.2	0.5-10.5	0.5 - 4.8	0.5 - 4.5	0.5 - 4	1.5 - 5.8	0.5 - 5.3	0.5 - 5.2	0.5 - 4	0.5 - 4.7	0.5 - 4.9	0.5 - 4.3	0.5 - 4.2	0.3-1.5	0.5-3	0.5-2.8	0.5-4.8
Depth Interval of Implant	5.5 - 6	5.5 - 6	5.5 - 6	5.5 - 6	5.5 - 6	11.5 - 12	5 - 5.5	5 - 5.5	4.3 - 4.8	6 - 6.5	5.5 - 6	5.5 - 6	4.5 - 5	5 - 5.5	5.5 - 6	4.5 - 5	4.4 - 4.9	3.5-4	3.5-4	3.3-3.8	5.3-5.8
Depth Interval of Glass Bead Sand	5.3 - 6	5.3 - 6	5 - 6	4.8 - 6	5.2 - 6	10.5 - 12	4.8 - 5.5	4.5 - 5.5	4 - 4.8	5.8 - 6.5	5.3 - 6	5.2 - 6.1	4 - 5	4.7 - 5.5	4.9 - 6.2	4.3 - 5	4.2 - 4.9	***	3-4	2.8-4	4.8-5.8

NOTES:
* - Indicates location where ground water was present at depth above six feet. Sampling point was installed to a shallower depth.
** - There was a clay layer below five feet at this location. Installed sampling point in shallower sand layer.
***- Soils collapsed around the probe at this location; a minimum of glass bead sand was added.
Depths rounded to nearest tenth of a foot.
Small descrepancies between the boring depth and the bottom of the glass bead sand at some locations result from collapsed material in the boring.

Table 3-2:
Soil Vapor Sampling Results
(in ppbv)

Sample Location (SVP#)			1	2	3		4	5	6	7A	8	9		10		11	12	13A	14		15	16	17	17A	23
Sample Date			4/1	4/1	4/1	8/19	4/1	4/1	3/31	8/20	3/31	3/31	8/19	3/31	8/20[1]	3/31	3/31	8/20	4/1	8/19	3/31	3/31	4/1	8/21	8/20
Method / Compound	Target Shallow Soil Gas Conc.**	OSHA PEL (ppbv)	**Concentrations in Soil Gas Sample (in ppbv)**																						
Method TO-15					@2100*					@250*		@1800*	@6000*									@150*		
Acetone	1,500	100,000	7.6	<3.9	<3.8	<4	<3.8	<3.7	6.7	300	11	<150	<96	730	<850	<3.8	<3.7	28	<1,600	<370	<3.7	<3.8	11	38	7.3
Benzene	98	1,000	<0.98	1.0	<0.96	<1	<0.96	<0.94	<0.96	820	1.5	<37	<24	680	1,600	<0.96	<0.94	22	1,100	2,300	<0.92	<0.98	3.5	10	1.3
Carbon Disulfide	2,200	20,000	<3.9	<3.9	<3.8	<4	<3.8	<3.7	<3.8	180	<3.7	<150	<96	<730	<850	<3.8	<3.7	86	<1,600	<370	<3.7	<3.8	<3.6	4.3	<3.9
Chlorobenzene	130	75,000	<0.98	<0.98	<0.96	<1	<0.96	<0.94	<0.96	760	<0.94	<37	<24	31,000	61,000	<0.96	<0.94	39	2,200	6,800	20	<0.98	<0.9	<1	1.2
Chloroform	22	50,000	<0.98	<0.98	<0.96	<1	<0.96	<0.94	<0.96	<9.8	11	<37	<24	<180	<210	<0.96	<0.94	18	<390	<92	<0.92	<0.98	<0.9	<1	<0.98
1,2-Dichlorobenzene	330	25,000	<0.98	<0.98	<0.96	<1	<0.96	<0.94	<0.96	970	<0.94	46	<24	870	2,600	<0.96	<0.94	4.8	<390	<92	8.2	<0.98	<0.9	<1	<0.98
1,4-Dichlorobenzene	1,300	10,000	<0.98	<0.98	<0.96	<1	<0.96	<0.94	<0.96	2,200	<0.94	<37	<24	4,500	14,000	<0.96	<0.94	10	<390	200	3.2	<0.98	<0.9	<1	<0.98
Cis-1,2-Dichlorothethene	23	200,000	<0.98	<0.98	<0.96	<1	<0.96	<0.94	<0.96	<9.8	<0.94	<37	<24	<180	<210	<0.96	<0.94	37	<390	<92	<0.92	<0.98	<0.9	<1	<0.98
MEK (2-Butanone)	3,400	100,000	<3.9	<3.9	<3.8	<4	<3.8	<3.7	<3.8	66	<3.7	<150	<96	<730	<850	<3.8	<3.7	5.7	<1,600	<370	<3.7	<3.8	<3.6	13	<3.9
MIBK (4-Methyl 2-Pentanone)	200	200,000	<3.9	<3.9	<3.8	<4	<3.8	<3.7	<3.8	230	<3.7	<150	<96	<730	<850	<3.8	<3.7	<1.2	72,000	<370	7.8	3.9	<3.6	5.8	<3.9
Tetrachloroethene	48	100,000	<0.98	<0.98	1.9	<1	<0.98	<0.94	150	12	1.1	55	<24	<180	<210	92	2.9	81	<390	<92	<0.92	<0.98	<0.9	<1	<0.98
1,1,1-Trichloroethane	4,000	100,000	<0.98	<0.98	<0.98	<1	<0.98	<0.94	<0.96	<0.98	<0.94	<37	<24	<180	<210	170	9.8	<1.2	<390	<92	<0.92	<0.98	<0.9	<1	<0.98
Trichloroethene	120	100,000	<0.98	<0.98	<0.98	<1	<0.98	<0.94	<0.96	<0.98	<0.94	<37	<24	<180	<210	<0.96	<0.94	36	<390	<92	<0.92	<0.98	<0.9	<1	<0.98
Vinyl Chloride	110	1,000	<0.98	<0.98	<0.98	<1	<0.98	<0.94	<0.96	<0.98	<0.94	<37	<24	<180	<210	<0.96	<0.94	6.8	<390	<92	<0.92	<0.98	<0.9	<1	<0.98
Method TO-13[2]																									
Aniline	NE	5,000	<13	<13	<13	<13	<13	<13	<13	<13	<13	<13	<13	26	<13	<13	<13	<13	109.8	<13	<13	<13	<13	<13	<13
Nitrobenzene	4	1,000	<10	<10	<10	<10	<10	<10	<10	17.3	<10	<10	<10	<19	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10

* Tracer gas (tetrafluoroethane or Freon 134) was reported in the sample at the concentration listed, indicating a leak in the sampling and/or analysis process.

** From Table 2a, US EPA "Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils"

[1] Data from duplicate sample SVP-100-SG-082003 reported

[2] Results reported in micrograms; conversion based upon sampled air volume and molecular weight of compound, rounded to nearest whole number for non-detects.

< Indicates compound was not detected above concentration indicated

NE Not Established

screened compound, then the screening exercise should not be used as an indicator of possible human health risk. The appropriate indicator still remains the OSHA PELs. It should be noted that as part of the field and laboratory sampling procedures, a volatile tracer (tetrafluoroethane or Freon 134a) was used to identify leaks in the sampling apparatus. That volatile tracer was detected in some samples, and those samples are noted in the "Method TO-15" row of Table 3-2. In the instances where the tracer was detected, there is the possibility of leakage of ambient outdoor air into the sample during sampling, or intrusion of laboratory air during analysis.

3.1.1 Samples With Elevated Results

There is only one soil vapor sample in which a compound exceeded the OSHA PEL. At SVP-10, in August, the concentration of 1,4-dichlorobenzene (14,000 ppbv) exceeded the OSHA PEL of 10,000 ppbv. The OSHA PEL was not exceeded in March at SVP-10. Since SVP-10 is not close to any of the buildings, the concentration of 1,4-dichlorobenzene has no effect on vapor intrusion into buildings. The corollary is that since none of the soil vapor concentration results near buildings are above the OSHA PELs, concentrations in the building would not be expected to be above the OSHA PELs. There were seven sample locations where measured soil vapor concentrations were above the EPA target soil vapor concentrations:

1. SVP-6: At soil vapor sampling site SVP-6, the concentration of tetrachloroethene in March was greater than the target soil vapor concentration. This location was not re-sampled in August

2. SVP-7A: Soil vapor sampling site SVP-7A was sampled only in August. The compounds which exceeded the target soil vapor concentrations are benzene, chlorobenzene, 1,2-dichlorobenzene, 1,4-dichlorobenzene, MIBK and nitrobenzene.

3. SVP-9: SVP-9 was sampled in both March and August. In March, the concentration of tetrachloroethene was greater than the target soil vapor concentration. When this site was re-sampled in August, none of the target compounds were detected.

4. SVP-10: Soil vapor sampling site SVP-10 was sampled both in March and in August. Both samples contained the same four volatile compounds. For each of the compounds, the August soil vapor concentrations were higher than in March.

5. SVP-11: The soil vapor sample collected from location SVP-11 in March contained tetrachloroethene at a concentration above the target soil vapor concentration. The compound 1,1,1-trichloroethane was also detected. This location was not re-sampled in August.

6. SVP-13A: Soil vapor sampling site SVP-13A was sampled only in August. Two of the compounds exceeded the target soil vapor concentrations: cis-1,2-dichloroethene and tetrachloroethene.

7. SVP-14: Soil vapor sampling site SVP-14 was sampled in both April and August. Four chemicals (benzene, chlorobenzene, 1,4-dichlorobenzene and MIBK) were detected. MIBK was detected in the April sample but not in the August sample and 1,4-dichlorobenzene appeared in the August sample, but not in the April sample. For the other two compounds, the August values are higher than the April values.

No other soil vapor samples contained any compounds that were detected at concentrations even approaching the target concentrations. In fact, only a limited number of analytes were detected in any of the soil vapor samples.

3.2 Benzene Pipeline Samples

Five soil vapor samples (SVP-18 through SVP-22) were collected along the benzene pipeline in April and analyzed for target VOCs by Method TO-15 to determine the potential for soil vapor contamination by the pipeline. These samples were taken as grab samples from similar, but temporary soil probes. A summary of the results is presented in Table 3-3 and the locations are shown on the map in Attachment B. Only two analytes were detected, acetone and MEK, at concentrations which were orders of magnitude less than the target shallow soil gas concentrations. Most notably, benzene was not detected.

Table 3-3:
Benzene Pipeline Soil Vapor Grab Samples Results (ppbv)

	Target Shallow Soil Gas Concentrations	Detection Limit	Concentration in Soil Gas Sample				
Sample Locations (SVP-#)			18	19	20	21	22
Method TO-15			**				
Acetone	1500	3.7	6.3	5.6	4.2	12	9
MEK	3400	3.7	8.4	11	5.5	ND	8

"**" denotes where the tracer gas was detected in the sample

"ND" represents not detected (detection limits are below target concentrations).

4.0 CONCEPTUAL VAPOR PATH MODEL

4.1 Vapor Path Analysis

It is helpful to produce a conceptual model of the vapor pathways to indoor concentrations in order to tie together the various measured data in a meaningful way. The conceptual model is provided in Table 4-1 and the detailed measurements are provided in Table 4-2. Table 4-1 shows that there are two primary paths that impact indoor air quality. The pathway that is evaluated in the EPA Draft Guidance on Vapor Intrusion is shown on the left in Table 4-1 (i.e., the pathway in which constituents in shallow groundwater volatilize into soil vapor, which then migrates indoors. The other pathway is the one in which the ambient air enters the building intake air and then flows to the indoor environment.

Table 4-1: Vapor Pathway Conceptual Model

				Building				
Shallow Ground Water Concentrations	⇒	Soil Vapor Concentrations	⇒	Indoor Concentrations	⇐	Intake Concentrations	⇐	Ambient Air Concentrations

Table 4-2 provides the numerical details. For each building, the constituents measured in indoor air have been listed. Those constituents measured in the intake air, but not in the indoor air have not been included on the list. The next column shows the measured results from shallow ground water samples located nearest to the building. The next column shows the soil vapor sampling results that were located next to the building. Thus, in order for the pathway from the ground water to be complete, the constituents detected in the building must be in both columns.

The last column shows the ambient air data and the column before this shows the air intake data for the building. As before, a complete pathway from the ambient air to indoor air requires that constituents be present in both of these columns.

For each building, the concentrations which exceeded the target indoor concentrations are highlighted. Each is discussed below:

- BBZ: Because MIBK was not detected in the nearby ground water, it is not the

Table 4-2: Vapor Pat[illegible]ay Conceptual Model

Details

Building	Constituent Detected	Shallow Ground Water Concentrations (µg/L)			⇒	Soil Vapor Concentrations (ppbv)	⇒	Building Indoor Air Concentrations (ppbv)	⇐	Air Intake to Building Concentration (ppbv)	⇐	Ambient Air concentrations (ppbv)
		G-108	**GP-9A**	**GP-13A**		**SVP-16**		**BBZ-O**		**BBZ-I**		
BBZ	Acetone	ND	<250	<500		ND		7.4/5.2		14/6.2		4.1-19
	Benzene	16	<250	1400		ND		ND/1.3*		ND/ND		ND
	Chlorobenzene	9	5300	220		ND		ND/9.2		ND/5.7		2.6/17
	MEK	ND	<1200	<250		ND		20/22		7.7/4.7		ND
	MIBK	ND	<1200	<250		3.9		130/86		160/78		ND
	Methylene Chloride	ND	NR	NR		ND		60/20		25/7.4		7.6/3.9
	1,1,1-Trichloroethane	ND	<250	<50		ND		ND/1.2		ND/ND		3.3
		G-106	**G-116**	**GM-29**		**SVP-23**		**BBG-O**		**BBG-I**		
BBG	Acetone	ND	ND	<100		7.3		110/5.6		ND/3.7		4.1-19
	Benzene	ND	ND	ND		1.3		0.86*/ND		ND/ND		ND
	Chlorobenzene	2300	1800	<10		1.2		0.86*/42		ND/43		2.6/17
	1,2-Dichlorobenzene	NR	NR	NR		ND		ND/1.1*		ND/1.6		ND
	MEK	NR	NR	<50		ND		21/ND		98/ND		ND
	MIBK	NR	NR	<50		ND		5.4/ND		ND/ND		ND
	Methylene Chloride	71	680	NR		ND		87/1.8		ND/1.5		7.6/3.9
			GM-15			**SVP-7A**		**CCB-O**		**CCB-I**		
CCB	Acetone		<50			300		20/21		3.4/ND		4.1-19
	Benzene		34			820		ND/1.0		0.92*/ND		ND
	Chlorobenzene		130			760		1.6*/ND		1.0*/ND		2.6/17
	Methylene Chloride		NR			ND		440/48		3.1/1.0*		7.6/3.7
			GP-20A			**SVP-6**		**BK-1st/BK-Dist**		**BK-I**		
BK	Acetone		<10,000			ND		4.4/6.0/4.0/6.2		4.5/ND		4.1-19
	Benzene		1,100			6.7		ND/0.84*/ND/ND		ND/ND		ND
	Chlorobenzene		26,000			ND		ND/3.3/ND/3.1		0.99*/1.9		2.6-17
	Methylene Chloride		NR			ND		13/12/24/6.2		2.2/1.6		7.6/3.9
	1,1,1-trichloroethane		<1,000			ND		ND/0.86*/ND/ND		ND/ND		3.3

* Concentration very close to the detection limit
Shaded values are above target concentrations

source of the MIBK in Building BBZ. The soil vapor does, contain low concentrations of MIBK (3.9 ppbv). However, this low level is insufficient to result in the much higher concentration indoors. The MIBK in the indoor air appears to be coming from air intakes to the offices sampled. These are inside the warehouse. In both winter and summer, the concentrations are nearly identical inside the offices and inside the warehouse. Clearly, therefore, the warehouse is the source. MIBK was not found in the ambient air samples which were taken at the soil vapor sample locations. The fact the office and warehouse concentrations are lower in the summer than in the winter appears to indicate that better ventilation is occurring in the summer because of more open doors/windows in the warehouse.

None of the other chemicals measured in the offices of the BBZ building were found in the soil vapor sample immediately adjacent to the building. Thus, they cannot be attributed to the ground water, but rather from the warehouse or the ambient air. Acetone, chlorobenzene and 1,1,1-trichloroethane were found in the ambient air. The ground water samples contained only benzene and chlorobenzene; however, since these were not present in the soil vapor sample, the groundwater to indoor air pathway is incomplete.

This conclusion is further supported by the fact that both benzene (BP-13A) and chlorobenzene (GP-9A) were measured in the ground water at concentrations above the Table 2a target ground water concentrations. Despite this fact, they were not measured in the soil vapor sample. If the soil vapor intrusion pathway were complete, one would have expected these chemicals to be present in the soil vapor.

- BBG: Chlorobenzene was detected in the ground water and a small amount (1.2 ppbv) was also detected in the soil vapor sample. However, the source of chlorobenzene in September is clearly the outside air since the intake concentration is nearly identical to the indoor concentration. The concentration of chlorobenzene in the March sample was very close to the detection limit. None of the other chemicals measured indoors were detected in the ground water and only acetone was present in both the soil vapor and the indoor air samples.

  Methylene chloride was measured in the ground water near Building BBG and yet was not present in the soil vapor sample. This supports the conclusion that ground water

to indoor air is an incomplete pathway in this building.

- CCB: Methylene chloride was not reported in the ground water sample and was not detected in the soil vapor sample. Because methylene chloride is in the ambient air and was measured in the intake, its presence in the indoor air sample must be attributed to the ambient air or to sources within the building itself.

  Again, looking at the ground water sample and the soil vapor sample near the building, one would expect to find significant concentrations of benzene and chlorobenzene in the indoor air. This was not the case, leading to the conclusion that the pathway is incomplete, a conclusion that is supported by the fact that while acetone was detected in the soil vapor sample, it was not detected in the ground water sample. Further support is provided by the fact that sample SVP-7A (not included on Table 4-2), next to Building CCB, contained soil vapor concentrations above the target concentrations for MIBK and 1,2-dichlorobenzene, and also significant concentrations of 1,4-dichlorobenzene and carbon disulfide. None of these compounds were detected in the indoor air samples.

- BK: None of the compounds detected in the indoor air samples in this building exceeded the target concentrations.

It is clear from these results that the attenuation in constituent concentrations that occurs along the ground water to soil vapor to indoor air pathway is substantial. In most cases, compounds detected in the shallow ground water are not detectable in the soil vapor.

4.2 Seasonal Variation

The sampling project was designed to measure concentrations in two seasons, winter and summer. The expectation was that evaporation of volatile compounds would be enhanced in the summer, thus leading to higher concentrations in the soil vapor and perhaps more vapor intrusion into the buildings. Table 4.3 shows each location where samples were taken in both sampling events and a "winter/summer" variation can be evaluated.

For the soil vapor samples, the two sample locations with high concentrations (SVP-10 and SVP-14) showed significantly higher concentrations in summer than in winter, as would be

expected. It should be noted that temperatures in August were about 100°F while those in March – April were in the 40 - 50°F range. However, when soil vapor concentrations are low, no temperature dependence is apparent. The air intake samples and the indoor samples do not show this same temperature related variability. Only chlorobenzene shows a uniform pattern of being higher in the "summer" sampling. The other compounds (MEK, MIBK and methylene chloride) were all higher in winter than in summer. This result, however, is probably related more to building ventilation than to concentration source strength, or to ground temperatures.

For most of the pairs of data, there is no definitive difference and they are marked "E" for "even". Low concentrations near the detection limit cannot do not react significantly to temperature differences.

Table 4-3: Seasonal Variations

All Concentrations are Presented in the Format "Winter/Summer"

(ppbv)

	Indoor Samples				Intake Samples				Soil Vapor Samples			
	BBZ	**BBG**	**CCB**	**BK**	**BBK**	**BBG**	**CCB**	**BK**	**SVP-9**	**SVP-10**	**SVP-14**	**SVP-17/17A**
Acetone	7.4/14 E	110/5.6 W	20/21 E	4.4/6.2 E	5.2/6.2 E	ND/3.7 E	3.4/ND E	4.5/ND E				11/38 E
Benzene	ND/1.3 E	0.86/ND E	ND/100 E	ND/0.84 E			0.92/ND E			680/1,600 S	1,100/2,300 S	3.5/10 E
Chlorobenzene	ND/9.2 S	0.86/42 S	1.6/ND E	ND/3.3 E	ND/5.7 S	ND/43 S	1.0/ND E	0.94/1.9 E		31,000/61,000 S	2,200/6,800 S	
1,2-Dichlorobenzene									46/<24 W	870/2600 S		
1,4-Dichlorobenzene										4,500/14,000 S		
MEK	20/7.7W	21/ND W			7.7/4.7 W	9.8/ND W						
MIBK	130/86 W	5.4/ND W			160/78 W						72,000/ND W	
Methylene Chloride	60/20 W	87/1.8 W	440/48 W	24/6.2 W	75/7.4 W	ND/1.5 E	3.1/1.0 W	2.2/1.6 E				
Tetrachloroethene									55/<24 W			

W = Winter

S = Summer

E= No substantial difference, i.e., even

5.0 DATA QUALITY ISSUES

5.1 Samples Collected

The indoor/building intake sampling was completed at all the intended locations. During the initial installation of the soil vapor probes in March 2003, one of the planned locations, adjacent to the BBG building, was omitted; this probe (SVP-23) was installed and sampled in August 2003.

Two soil vapor sample locations (SVP-7 and SVP-13) could not be sampled in April and three in August (SVP-7, SVP-13 and SVP-17) because the soil vapor probes filled with water. These probes were reinstalled to a shallower depth in August (SVP-7A, SVP-13A, and SVP-17A) and were sampled in August.

The volatile tracer gas (tetrafluoroethane or Freon 134a) was detected in four samples at concentrations up to 2,100 ppbv. The presence of the gas indicates leakage either during field sampling, when ambient outdoor air could have entered the sample, or during laboratory analysis, when ambient laboratory air could have entered the sample. In either case, the results at these locations may not be entirely representative of soil vapor concentrations, as acetone, methylene chloride, chlorobenzene, and 1,4-dichlorobenzene were detected in the background air samples.

Method TO-13 was added to the sampling program to obtain data on semi-volatile compound concentrations. The sample preservation methods employed during the winter sampling were not consistent with the method in all respects. It was noted by the laboratory in the first record (March – April 2003) that all samples were not refrigerated and not returned to the laboratory in the original reflective sleeves for the winter sampling. However, the method itself does not require refrigeration. For the summer sampling, the building samples were received in good order but the soil vapor samples were not sufficiently cold. The use of the sleeves would reduce the likelihood of absorbing contaminants from the plastic shipping bag. The detection of aniline in only a few samples and not in the field blank suggests that this error did not compromise the samples. Refrigeration would reduce the likelihood of organic compound degradation or volatilization loss between collection and analysis. In the second record, the samples were packaged in the reflective sleeves. However, despite the use of "blue" ice, all samples did not arrive at the laboratory at the prescribed temperature. The short sample turnaround times (72 hours) should minimize the influence of this error on data quality. Icing

was done on the second set of soil vapor samples sent to the laboratory and no semi-volatile, other than aniline, was detected. Consequently, although these deficiencies are noted, it appears unlikely that they compromised data quality.

Duplicate samples were taken throughout the sampling exercise. The duplicate sample results are as follows:

Indoor Air Sample Duplicate Comparisons (ppbv)			
Analytes	**Original**	**Duplicate(s)**	**Ratio(s)**
(Building BK-Basement) March			
Acetone	4.0	4.1	1.03
Methylene Chloride	24	18	0.75
(Building BK-Basement) September			
Acetone	6.2	4.1, 5.2	.66, .84
Chlorobenzene	3.1	1.7, 1.7	.55, .55
Methylene Chloride	6.2	12, 11	1.94, 1.77

One of the August duplicate soil vapor samples (SVP-10 and SVP-100) contained only Freon, indicating significant leakage, so no duplicate comparison for August is available. No analytes were detected in any of the trip blanks and laboratory blanks.

Soil Vapor Sample Duplicate Comparisons (ppbv) April			
Samples/Analytes	**Original**	**Duplicate**	**Ratio**
SVP-10/SVP-100			
Benzene	680	660	0.97
Chlorobenzene	31000	32000	1.03
1,2-Dichlorobenzene	870	810	0.93
1,4-Dichlorobenzene	4500	4400	0.98
SVP-14 / SVP-140			
Benzene	1100	1100	1.00
Chlorobenzene	2200	2300	1.05
MIBK	72000	75000	1.04
Aniline	8.6	6.4	0.74
SVP-4/SVP-4 Duplicate	all non-detect	all non detect	
SVP-12/ SVP-12 Duplicate			
1,1,1-Trichloroethane	9.8	9.4	0.96
Tetrachloroethene	2.9	2.8	0.97
SVP-8/SVP-8 Duplicate			
Chloroform	11	11	1.0
Benzene	1.5	1.6	1.07
Tetrachloroethene	1.1	1.1	1.0
Acetone	11	12	1.09

6.0 CONCLUSIONS

The intensive sampling of soil vapor, indoor ambient air, and outdoor ambient air conducted during March - April and August – September 2003 leads to the following conclusions:

- The impacted shallow ground water beneath the W. G. Krummrich plant is not resulting in unacceptable indoor air quality at the plant. In three process area buildings (BBZ, BBG and CCB), VOCs were detected in the office area samples at concentrations above the EPA target indoor concentrations (MIBK, chlorobenzene and methylene chloride, respectively), but well below the OSHA PELs for these compounds. The draft EPA Subsurface Intrusion Guidance notes that these target indoor air concentrations are not intended for use in industrial exposure scenarios and that OSHA guidelines are more appropriate in these circumstances. The presence of all or most of these compounds is apparently due to outdoor air sources and/or sources within these buildings. The analytical results for the ground water samples and soil vapor samples collected adjacent to Building BBZ (SVP-16) support the conclusion that the ground water and the soil vapor are not the primary source of the VOCs detected in the indoor air. In September, chlorobenzene in the BBG building was found in equivalent concentrations to that found in the intake air. In the case of Building CCB, the only analyte which exceeded the target indoor air concentration was methylene chloride, which was detected in all the indoor air samples and none of the soil vapor samples, suggesting a common indoor source. A soil vapor sample collected immediately adjacent to Building CCB did not contain methylene chloride. In all three cases, the measured concentrations in indoor air are well below the OSHA PELs.

- Indoor air samples collected from Building BK (administration building) did not contain target analytes at concentrations above the EPA target indoor concentrations, and thus well below the OSHA PELs.

- Benzene, chlorobenzene, or isomers of dichlorobenzene (the largest components of the plumes in ground water below the site) were not found in significant amounts in any of the buildings. The amounts found were slightly above the detection limits and were

probably from the ambient air. A conceptual model of the pathways shows that all or a majority of the indoor concentrations come from the ambient air.

- The soil vapor sampling showed seven locations with concentrations above the EPA soil vapor target concentrations. Five of these samples were not located in areas near buildings and for the two that are near buildings, there is no evidence of migration (either through the soil, or in the air) to the buildings sampled.

- Based on the five soil vapor samples collected along the route of the benzene pipeline, the benzene pipeline does not appear to be leaking to the soil.

Attachment A

Field Sampling Plan and Field Data Summary Sheets

Soil Vapor Probe Installation and Sampling Protocol

Sampling Objective/Approach

Soil vapor samples will be collected at the 17 on-site locations. The intent is to collect samples during cold weather (March) and warm weather (June), so permanent soil vapor sampling probes will be installed.

In areas above the plume where no buildings are present or where buildings are built on slab, shallow soil vapor samples will be collected at a probe depth of 5 to 6 feet below grade, which will place the probe sufficiently deep to minimize temperature and barometric pressure fluctuations. In areas above the plume where buildings with basements or lower levels are present (Building BK, the main office building), soil vapor samples will be collected at a probe depth at or below the lowest floor or basement level. The soil vapor implant depths will be targeted to more-permeable soil zones within the target depths. In the event that water-saturated conditions are encountered at or above the target probe depth, the probe depth will be modified to above the depth of saturation.

Probe Installation and Sampling Equipment

The following equipment is recommended for soil vapor probe installation and soil vapor sampling:

- direct-push drilling rig with Geoprobe™ Macrocore sampler, acetate liners, probe tip, and probe rods;
- Geoprobe™ stainless-steel implant (AT 86, or similar), 6" length;
- Geoprobe™ implant anchor (PR14 or equivalent);
- Geoprobe™ glass beads (AT84), or clean silica sand;
- flexible Teflon tubing, 1/4-inch outer diameter;
- flexible Tygon tubing of appropriate sizes to connect drive tubing to SUMMA canister and to the sorbent-media tubes;
- tubing fittings: plugs, ferrules, nuts, 'T's;
- SUMMA canister (6 liter) with vacuum gauge and restrictive inlet (45-minute and 90-minute fill time);
- bentonite (granular or powdered) and potable water;
- wind socks or flags;
- narrow metal tape measure or foldable fiberglass ruler;
- decontamination equipment;
- volatile tracer gas (tetrafluoroethane) in cans;
- field book, data logging forms, and chain-of-custody forms;
- flags, stakes, or other means to mark and label sampling locations;
- health and safety gear appropriate to the job; and
- miscellaneous tools (wrench, scissors, knife).

In addition, soil samples will be collected from the probe depths at the boring locations near the four buildings for analysis for total organic carbon and moisture content. Laboratory-prepared sample bottles, sampling spatulas, insulated coolers, ice and plastic bags (or blue ice), and packing materials will also be required equipment.

Sampling Point Installation Procedures

The soil vapor probe construction is depicted in Figure C-1. Placement of the soil vapor probes will proceed as follows:

- Identify and mark the vapor probe locations in advance; Solutia personnel will clear all locations for the presence of utilities. Label locations with unique identification numbers.
- Core pavement at paved locations to allow placement of a protective valve box upon completion.
- Advance the Macrocore sampler to the desired depth and withdraw the sampler; log the sampler return at locations where logs are not available.
- Collect and log the soil sample from the probe depth at the four boring locations near buildings. The sample will be collected directly from the acetate liner and placed into laboratory-supplied sample jars for analysis for total organic carbon and moisture content. Preserve the soil samples by storing and shipping on ice (4^0C).
- Assemble the probe anchor, probe implant, and tubing (include sufficient excess tubing length to protrude from the upper end of the drive tubing) into a probe assembly.
- Install the anchor end of the probe assembly to the desired depth within the borehole either manually or by using the probe rods (use of the probe rods will be required if the boring collapses). Measure the depth to the probe implant.
- Backfill the annular space around the probe implant with glass beads; if the borehole collapses, the probe assembly will be installed into the probe rods and the implant will be advanced to the desired depth; the backfilling would then be accomplished through the probe rods.
- Similarly, backfill the remainder of the annular space to within approximately one foot of grade with bentonite chips, slightly hydrating the chips every six inches when constructing in an open hole, or hydrating upon withdrawal of the probe rods (to avoid bridging), if constructing within the probe rods.
- Cap the upper end of the tubing as soon as possible in the procedure.
- Secure the top of the installation by installing a valve box or a protective casing, as appropriate for the location.
- Secure the upper end of the tubing within the valve box or protective casing.

- Decontaminate downhole equipment which contacts the soil by washing with lab-grade detergent and potable water and rinse with potable water.

A written record will be kept of the sampling point depth and construction.

Soil Vapor Sampling Procedures

Soil vapor sampling will proceed several days following the sampling point installation using the procedures described below. The soil vapor samples will be collected and analyzed for several volatile organic compounds and several semivolatile organic compounds, as listed below:

Volatile Organic Compounds (VOCs) by Method TO-15	Semi-Volatile Organic Compounds (SVOCs) by Method TO-13
bromodichlorobenzene	aniline
carbon disulfide	chloroaniline
1,1-dichloroethane	phenol
chloroform	chlorophenol
methylene chloride	dichlorophenol
vinyl chloride	nitrochlorobenzene
tetrachloroethane	trichlorophenol
trichloroethene	nitrobenzene
1,2-dichloroethene	pentachlorophenol
naphthalene	
chlorotoluene	
bromoform	
tert-butylbenzene	
benzene	
chlorobenzene	
1,2-dichloroethane	
1,1,1-trichloroethane	
acetone	
2-butanone (MEK)	
methyl isobutyl ketone (MIBK)	
o-dichlorobenzene	
p-dichlorobenzene	

The variety of analytes will necessitate the use of two sample collection devices: 1) SUMMA canisters and 2) sorbent media. Analyses will be conducted using USEPA Methods TO-15 and TO-13, respectively, by Air Toxics, Inc. of Rancho Cordova, CA. The two sampling methods will be employed sequentially: first by SUMMA canister followed by collection on the sorbent media. The samples collected by SUMMA canisters will be collected over a period of 45 minutes (flow rate of 0.11 liters/minute) using a flow-restrictive inlet. The samples collected on sorbent media will be collected using pre-calibrated air pumps and laboratory-supplied media; the duration of sampling will be approximately 120 minutes or more, sufficient to draw 20 liters of soil vapor

across the collection media at a rate of less than 0.2 liters/minute (lpm). Sampling times will be doubled and flow rates will be halved for the duplicate samples.

- Note the wind direction at the sampling location and record.
- Screen the ambient air with a PID and record reading.
- Connect the pump to the probe apparatus.
- Start the pump, and evacuate a volume equal to three to five sampling apparatus volumes at a low flow rate (0.2 lpm or less); record the flow rate and duration and calculate the volume removed.
- Wait for the vacuum to dissipate in the tubing.
- Remove the pump and immediately connect the SUMMA canister and 45-minute flow restrictor to the probe tubing (use 90-minute flow restrictor and Teflon 'T' for duplicate samples). Record the canister number.
- Open the valve to the SUMMA canister. Record the time.
- During the first five (5) minutes of sampling, periodically direct the tracer gas liberally around the tubing connections and around the well head.
- Return to recover the canister within 45 minutes after initiation of sampling (90 minutes for the duplicate samples).
- Close the valve to the SUMMA canister. Close the valve on the tracer gas cylinder.
- Open one sorbent media tube and break the seals; attach the downstream side to the intake side of the pump.
- Remove the SUMMA canister and immediately install the sorbent-media and pump assembly using a short length of Tygon tubing or a Teflon union.
- Start the pump at a low flow rate (target rate of 0.15 liters/minute) and record the time and flow rate. (When collecting the duplicate sample, set each of the pumps at a flow rate of less than 0.075 liters/minute, so the total withdrawal rate is approximately 0.15 liters/minute).
- Remove the flow restrictor from the SUMMA canister and pack the canister for shipping.
- Operate the pump for a sufficient duration to pull 20 liters of soil vapor across the media; record the pumping rate and duration.
- Record the pump serial number.
- Remove and cap the sorbent-media tube. Pack tube for shipping.
- Post-calibrate the pump at the end of each sampling day.
- Cap the tubing and secure the probe head.

Site conditions at the time of sampling, such as ambient air temperature and wind direction, will be recorded frequently during the sampling day. An example field data form is attached. The barometric pressure for the sampling period will be obtained from the nearest weather recording station (Lambert-St. Louis International Airport, St. Louis, MO) and barometric pressure readings will also be collected using an on-site barometer. In the event of a soaking rain, sampling will be postponed until 12 hours after the rainfall event.

Quality Assurance/Quality Control

Care will be taken to avoid possible sources of cross contamination (e.g., gasoline, solvents, etc.) during on-site storage of sampling media. In addition, care will be taken to keep vehicles away from sampling locations during sampling set up and during sampling.

One potential interference in implementing the soil gas sampling procedure is the possibility of atmospheric air entering the sampling train and the sample. This will be minimized by construction of a bentonite seal above the sampling inlet at all locations. A tracer gas will be used at the well head of at least 50% of the wells to check for leakage. In addition, the number of tubing connections will be minimized. Ambient air samples (morning and afternoon of each sampling day) will also be collected.

Contamination of sample containers, such as inadequate canister cleaning or contamination during shipping, are possible sources of sample interference. To address this concern, the laboratory will certify the canisters and a canister blank will be collected. This canister blank will also serve as a trip blank for the SUMMA canisters. A trip blank will also be collected for the sorbent media tubes.

Duplicate samples will be collected to assess analytical reproducibility.

These quality assurance samples will be collected as follows:

Ambient Air/Background Sample: Two samples of ambient air (morning and afternoon) will be collected associated with each day of sampling. A location will be selected in the vicinity of one of the sampling probe locations. The samples will be collected simultaneous to the collection of the soil vapor sample by attaching the flow inlet to the SUMMA canister, setting the intake to a height of two feet above grade, and opening the valve to allow filling at a rate similar to the soil vapor sampling rate. The sample for semivolatile organic analysis using sorbent media will be collected using a calibrated pump.

Duplicate Samples: Duplicate samples will be collected at a rate of one in twenty or a minimum of one per day. Locations above the plume will be selected for the duplicate samples. A 'T' will be installed on the soil vapor probe tubing instead of the straight-line connector and two SUMMA canisters will be attached, allowing the simultaneous connection of two SUMMA canisters over a 90-minute period. Similarly, for the collection of a duplicate sample for semivolatile organic analysis, and separate tubes and pumps will connected to the 'T' to allow simultaneous sampling.

Trip Blank/Canister Blank: Each batch of SUMMA canisters, since they are reusable and subject to decontamination at the laboratory, will certified clean by the laboratory. In addition, one canister per shipment, to be labeled "trip blank"-mm/dd/yy, will remain empty (under negative pressure) during the trip to and

from the field. The trip/canister blank will be packaged along with the soil vapor samples for the return trip to the laboratory for analysis. Upon arrival at the laboratory, it will be filled in the laboratory with lab-grade nitrogen and submitted for analysis. The trip blank for the sorbent media will be prepared by uncapping an unused tube, breaking the ends, capping the tube, and labeling and packing the tube for shipment (this will serve as both a check on field and shipping conditions).

Samples will be analyzed by the laboratory within 48 hours of receipt or within 72 hours of sample collection.

Sample Labeling and Handling

Sample canisters and sorbent media will arrive from the laboratory in a shipping carton.

All samples will be uniquely labeled using a consistent sample-numbering system which will differentiate these samples from other media collected from the same sample locations, as follows

For soil gas samples:

Sample location-media-date, e.g., xxxx-SG-03/28/03

For soil samples, the sample depth (in feet below grade) will be included in place of the date:

Sample location-media-depth, e.g., xxxxx-SOIL-2-3

The ambient air blank and duplicate samples will be blind-labeled. The samples will be re-packaged in the shipping cartons for return shipment from the site to the laboratory, and will be shipped overnight delivery using common carrier. The canisters and sorbent tubes will be packed to prevent breakage; no additional packing, such as ice or cold packs, is required. All sample shipments will be accompanied by a chain-of-custody form noting sample numbers, sample times, requested analyses/methods, sampler names, and signatures of sample handlers.

The lead sampler will notify the laboratory of the shipment of the samples to the laboratory and will confirm arrival.

References:

"How to Collect Reliable Soil-Gas Data for Risk-Based Applications, Part 1: Active Soil Gas Method", Blayne Hartman, LUSTLine Bulletin, October 2002.

Soil Vapor Sampling Field Form: Probe#_____

Sample No.:_____ **Date:**_____

Client: Solutia, Inc. **Site Location:** W.G. Krummrich Plant
Sauget, IL

Samplers:_____

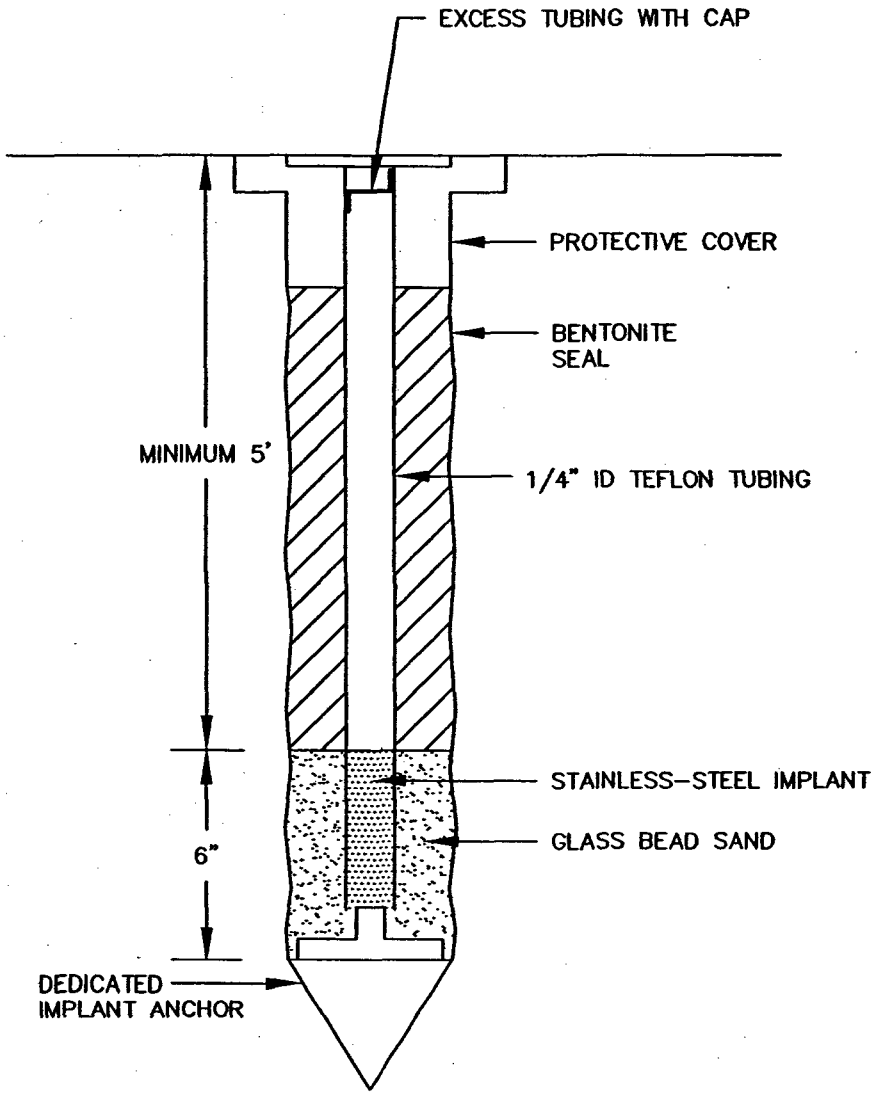
Volatile Organic Compound Sampling		**SemiVolatile Organic Compound Sampling**	
Pump No.		***Pump No.:***	
Purge rate (cc/min):		***Purge rate (cc/min):***	
Purge duration (min):		***Target purge duration (min)***	
Purge volume (cc):		***Purge start time:***	
Canister No.:		***Purge finish time:***	
Flow restrictor (min):		***Actual purge duration (min):***	
Start time:		***Sample no.:***	
Start vacuum reading (mm Hg):		***Duplicate sample?:***	
Finish time:		***Duplicate sample no.:***	
Finish vacuum reading (mm Hg):			
Tracer used?:			
Duplicate sample?:			
Duplicate canister no.:			

Notes (ambient temperature, barometric pressure reading and time, modifications to sample train, etc.):

_____

_____

_____



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SOLUTIA INC.
SAUGET, ILLINOIS

SOIL GAS SAMPLING POINT CONSTRUCTION

Date: 12/18/02 | Project No. 38182-0000-00000

38182\D-1

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Table 1
SOIL GAS SAMPLING POINT CONSTRUCTION SUMMARY
SOLUTIA - SAUGET, ILLINOIS
MARCH, 2003

Soil Gas Sampling Location ID Date of Installation Type of Protective Cover	SVP-1 3/20/03 Stick-up	SVP-2 3/20/03 Stick-up	SVP-3 3/20/03 Stick-up	SVP-4 3/20/03 Stick-up	SVP-5 3/20/03 Road Box	SVP-6 3/20/03 Road Box	SVP-7 3/20/03 Road Box	SVP-8 3/20/03 Road Box	SVP-9 3/21/03 Road Box	SVP-10 3/21/03 Road Box	SVP-11 3/21/03 Road Box	SVP-12 3/21/03 Road Box	SVP-13 3/21/03 Road Box	SVP-14 3/21/03 Road Box	SVP-15 3/21/03 Road Box	SVP-16 3/21/03 Road Box	SVP-17 3/21/03 Road Box
(All units in feet below grade) **Total Boring Depth**	6.08	6.08	6	6.08	6.08	12	5.5	5.5	4.75*	6.5	6.08	6.08	5*	5.5	6.17	5*	5**
Depth Interval of Bentonite Seal	0 - 5.3	0 - 5.3	0 - 5	0 - 4.83	0.5 - 5.17	0.5-10.5	0.5 - 4.75	0.5 - 4.5	0.5 - 4	1.5 - 5.83	0.5 - 5.33	0.5 - 5.17	0.5 - 4	0.5 - 4.67	0.5 - 4.92	0.5 - 4.25	0.5 - 4.17
Depth Interval of Implant	5.5 - 6	5.5 - 6	5.5 - 6	5.5 - 6	5.5 - 6	11.5 - 12	5 - 5.5	5 - 5.5	4.25 - 4.75	6 - 6.5	5.5 - 6	5.5 - 6	4.5 - 5	5 - 5.5	5.5 - 6	4.5 - 5	4.4 - 4.9
Depth Interval of Glass Bead Sand	5.3 - 6	5.3 - 6	5 - 6	4.83 - 6	5.17 - 6	10.5 - 12	4.75 - 5.5	4.5 - 5.5	4 - 4.75	5.83 - 6.5	5.33 - 6	5.17 - 6.08	4 - 5	4.67 - 5.5	4.92 - 6.17	4.25 - 5	4.17 - 4.92

Solutia
Proj # 38182-
Dennis P. Ryder
Field Notes – 3/29/03

BK Building

Barametric Pressure:

- Exterior of building = 29.92
- Inside Distribution area = 29.96
- Inside Rick Moore Office (1st floor) = 29.96

Temperature: (^{0} F)

- Exterior of Bldg = 41.8
- Inside of Dist area = 70.3
- Inside of Rick Moore Office (1st Floor) = 70.0

Air Flows: (fpm)

- From exterior into Dist Areas = 150
- From Training area into Dist Area = 50
- From Rick Moore Office into outer common area = 20
- From exterior into intake of AHU (on roof) = 150 (area of intake = 7' * 4')

Note:

- Distribution Area has tile floor and finished walls (Basement area)
- 1st floor Office areas have tile floors and finished walls
- AHU is located on roof

CCB Building

Barametric Pressure:

- Exterior of building = 29.92
- Interior of office = 29.92

Temperature: (^{0} F)

- Exterior of building = 41.9
- Interior of office = 71.4

Air Flows: (fpm)

- Exterior into firetruck bay area = 300
- From office into firetruck bay area = 25
- From office into shop area = 25
- Exterior into shop area = 200

Note:

- Office area has tile floors
- Shop area & fire truck bay areas have cement slab
- Walls are cinder block

BBG Building

Barametric Pressure:

- Exterior of building = 29.93
- Inside of office = 29.90

Temperature: (^{0} F)

- Exterior of building = 46.1
- Inside of office = 59.6

Air Flows: (fpm)

- From office to shop area = 140
- From exterior into shop area = 400

Note:

- Cement floor in office area
- Space (approx ½ inch) where slab meets cinder block walls
- No visable cracks in floor

BBZ Building

Barametric Pressure:

- Office area = 29.89
- storage area = 29.88
- exterior of bldg = 29.89

Temperature: (^{0} F)

- storage area = 69.6
- exterior of bldg = 49.7
- inside office area = 67.7
- at AHU intakes = 72.2

Air Flows: (fpm)

- from storage area into office area = 25
- At AHU intake = 25
- From exterior into storage area = 325

Note:

- The AHU for the Office Area is located on the office roof. The office & office roof are located within the BBZ building. The air-intakes for the office AHU are located in the BBZ building.
- Some minor cracks in slab
- Gaps (approx ½ inch) where slab meets exterior walls (block)
- Office area has tile floor-painted cinder block wall

Soil Vapor Sampling Field Form

Vapor Probe No.: SVP-1 **Date:** 3/4/03

Client: Solutia, Inc. **Site Location:** W.G. Krummrich Plant Sauget, IL

Samplers: KLS ML

Volatile Organic Compound Sampling		SemiVolatile Organic Compound Sampling	
Pump No.	3579	*Pump No.:*	
Purge rate (cc/min):	200	*Purge rate (cc/min):*	150
Purge duration (min):	2	*Target purge duration (min)*	135
Purge volume (cc):		*Purge start time:*	1349
Canister No.:	33876	*Purge finish time:*	1604
Flow restrictor (min):	45	*Actual purge duration (min):*	135
Start time:	1246	*Sample no.:*	SVP-1-SG-030303
Start vacuum reading (mm Hg):	28.5	*Duplicate sample?:*	N
Finish time:	1331	*Duplicate sample no.:*	—
Finish vacuum reading (mm Hg):			
Tracer used?:	—		
Duplicate sample?:	N		
Duplicate canister no.:	—		

Notes (barometric pressure reading and time, modifications to sample train, etc.):

BP = 29.5 PID = Ø

temp: 72

Wind = from S

Soil Vapor Sampling Field Form

Vapor Probe No.: SVP-2 **Date:** 4/1/03

Client: Solutia, Inc. **Site Location:** W.G. Krummrich Plant Sauget, IL

Samplers: M. Danzalla

Volatile Organic Compound Sampling		SemiVolatile Organic Compound Sampling	
Pump No.	0899	*Pump No.:*	3553
Purge rate (cc/min):	200	*Purge rate (cc/min):*	150
Purge duration (min):	2	*Target purge duration (min)*	135
Purge volume (cc):		*Purge start time:*	1135
Canister No.:	22501	*Purge finish time:*	1350
Flow restrictor (min):	45	*Actual purge duration (min):*	135
Start time:	1047	*Sample no.:*	SVP-2
Start vacuum reading (mm Hg):	29	*Duplicate sample?:*	No
Finish time:	1132	*Duplicate sample no.:*	—
Finish vacuum reading (mm Hg):	9		
Tracer used?:	Yes		
Duplicate sample?:	No		
Duplicate canister no.:	—		

Notes (barometric pressure reading and time, modifications to sample train, etc.):

Baram. Press – 29.5 PID = 0

Temp - 79

Wind from SE

Soil Vapor Sampling Field Form

Vapor Probe No.: SVP-3 **Date:** 4/1/03

Client: Solutia, Inc. **Site Location:** W.G. Krummrich Plant Sauget, IL

Samplers: M. Danzella

Volatile Organic Compound Sampling		SemiVolatile Organic Compound Sampling	
Pump No.	0899	*Pump No.:*	9345
Purge rate (cc/min):	200	*Purge rate (cc/min):*	150
Purge duration (min):	2	*Target purge duration (min)*	135
Purge volume (cc):		*Purge start time:*	1146
Canister No.:	405	*Purge finish time:*	1401
Flow restrictor (min):	45	*Actual purge duration (min):*	135
Start time:	1100	*Sample no.:*	SVP-3
Start vacuum reading (mm Hg):	28	*Duplicate sample?:*	No
Finish time:	1145	*Duplicate sample no.:*	—
Finish vacuum reading (mm Hg):	7		
Tracer used?:	Yes		
Duplicate sample?:	No		
Duplicate canister no.:	—		

Notes (barometric pressure reading and time, modifications to sample train, etc.):

Barom. Press. — 29.5 PID = Ø

Temp. — 79

Wind from SE

Soil Vapor Sampling Field Form

Vapor Probe No.: SVP-04 **Date:** 4/01/03

Client: Solutia, Inc. **Site Location:** W.G. Krummrich Plant Sauget, IL

Samplers: KLS ML

Volatile Organic Compound Sampling		SemiVolatile Organic Compound Sampling	
Pump No.	3579	*Pump No.:*	0850
Purge rate (cc/min):	200	*Purge rate (cc/min):*	150
Purge duration (min):	2	*Target purge duration (min)*	135
Purge volume (cc):		*Purge start time:*	1145
Canister No.:	45679	*Purge finish time:*	1400
Flow restrictor (min):	45	*Actual purge duration (min):*	135
Start time:	1053	*Sample no.:*	SVP-4-SG-040103
Start vacuum reading (mm Hg):	28.5	*Duplicate sample?:*	No
Finish time:	1138	*Duplicate sample no.:*	—
Finish vacuum reading (mm Hg):	8.0		
Tracer used?:	Yes		
Duplicate sample?:	No		
Duplicate canister no.:	—		

Notes (barometric pressure reading and time, modifications to sample train, etc.):

BP = 29.55 PID = Ø

Temp = 70°C

Wind = from SW

Soil Vapor Sampling Field Form

Vapor Probe No.: SVP-5 **Date:** 4/1/03

Client: Solutia, Inc. **Site Location:** W.G. Krummrich Plant Sauget, IL

Samplers: KL ; ML

Volatile Organic Compound Sampling		SemiVolatile Organic Compound Sampling	
Pump No.	3579	*Pump No.:*	3456
Purge rate (cc/min):	200	*Purge rate (cc/min):*	150
Purge duration (min):	2	*Target purge duration (min)*	135
Purge volume (cc):		*Purge start time:*	0926
Canister No.:	12003	*Purge finish time:*	1141
Flow restrictor (min):	45	*Actual purge duration (min):*	135
Start time:	0837	*Sample no.:*	SVP-5-SG-040103
Start vacuum reading (mm Hg):	28.5	*Duplicate sample?:*	N
Finish time:	0922	*Duplicate sample no.:*	—
Finish vacuum reading (mm Hg):	8.5		
Tracer used?:	Yes		
Duplicate sample?:	N		
Duplicate canister no.:	—		

Notes (barometric pressure reading and time, modifications to sample train, etc.):

BP: 29.55 PID = Ø

temp = 66°C

Wind from SW

Soil Vapor Sampling Field Form

Vapor Probe No.: SVP-6 **Date:** 3/31/03

Client: Solutia, Inc. **Site Location:** W.G. Krummrich Plant Sauget, IL

Samplers: M. Danzella

Volatile Organic Compound Sampling		SemiVolatile Organic Compound Sampling	
Pump No.	3579	*Pump No.:*	3546
Purge rate (cc/min):	200	*Purge rate (cc/min):*	150
Purge duration (min):	2	*Target purge duration (min)*	135
Purge volume (cc):		*Purge start time:*	1530
Canister No.:	945	*Purge finish time:*	1745
Flow restrictor (min):	45	*Actual purge duration (min):*	135
Start time:	1443	*Sample no.:*	SVP-6
Start vacuum reading (mm Hg):	29	*Duplicate sample?:*	No
Finish time:	1528	*Duplicate sample no.:*	—
Finish vacuum reading (mm Hg):	9		
Tracer used?:	Yes		
Duplicate sample?:	No		
Duplicate canister no.:	—		

Notes (barometric pressure reading and time, modifications to sample train, etc.):

Wind from SE

Barometric Pressure – 29.65

Temp – 65

Soil Vapor Sampling Field Form

Vapor Probe No.: SVP-8 **Date:** 3/31/03

Client: Solutia, Inc. **Site Location:** W.G. Krummrich Plant Sauget, IL

Samplers: ML/KL

Volatile Organic Compound Sampling		SemiVolatile Organic Compound Sampling	
Pump No.	3579	*Pump No.:*	3175
Purge rate (cc/min):	200	*Purge rate (cc/min):*	150
Purge duration (min):	2	*Target purge duration (min)*	135
Purge volume (cc):		*Purge start time:*	1200
Canister No.:	1052	*Purge finish time:*	1415
Flow restrictor (min):	45	*Actual purge duration (min):*	135
Start time:	1110	*Sample no.:*	SVP-8-SG-033103
Start vacuum reading (mm Hg):	29.0	*Duplicate sample?:*	No
Finish time:	1159	*Duplicate sample no.:*	—
Finish vacuum reading (mm Hg):	8.0		
Tracer used?:	Y		
Duplicate sample?:	N		
Duplicate canister no.:	—		

Notes (barometric pressure reading and time, modifications to sample train, etc.):

BP = 29.8 PID = 0 ppm

Temp = 61.0

W = SE

Soil Vapor Sampling Field Form

Vapor Probe No.: SVP-9 **Date:** 3/31/03

Client: Solutia, Inc. **Site Location:** W.G. Krummrich Plant Sauget, IL

Samplers: KL & ML

Volatile Organic Compound Sampling		SemiVolatile Organic Compound Sampling	
Pump No.	3579	*Pump No.:*	3181
Purge rate (cc/min):	200	*Purge rate (cc/min):*	150
Purge duration (min):	2	*Target purge duration (min)*	135
Purge volume (cc):		*Purge start time:*	1550
Canister No.:	433	*Purge finish time:*	1805
Flow restrictor (min):	45	*Actual purge duration (min):*	135
Start time:	1457	*Sample no.:*	SVP-9
Start vacuum reading (mm Hg):	28.5	*Duplicate sample?:*	—
Finish time:	1542	*Duplicate sample no.:*	—
Finish vacuum reading (mm Hg):	8.5		
Tracer used?:	Yes		
Duplicate sample?:	—		
Duplicate canister no.:	—		

Notes (barometric pressure reading and time, modifications to sample train, etc.):

BP= 29.65 PID= 0

Temp= 60° F

Wind from South

Soil Vapor Sampling Field Form

Vapor Probe No.: SVP-10 / SVP-100 **Date:** 3/31/03

Client: Solutia, Inc. **Site Location:** W.G. Krummrich Plant Sauget, IL

Samplers: KL & ML

Volatile Organic Compound Sampling		SemiVolatile Organic Compound Sampling	
Pump No.	3579	*Pump No.:*	3187 / 0283 D.P.
Purge rate (cc/min):	200	*Purge rate (cc/min):*	75
Purge duration (min):	2	*Target purge duration (min)*	270
Purge volume (cc):		*Purge start time:*	1421
Canister No.:	9201	*Purge finish time:*	1851
Flow restrictor (min):	60	*Actual purge duration (min):*	270
Start time:	1312	*Sample no.:*	SVP-10
Start vacuum reading (mm Hg):	30/29	*Duplicate sample?:*	Yes
Finish time:	1412	*Duplicate sample no.:*	SVP-100
Finish vacuum reading (mm Hg):	8/9		
Tracer used?:	Yes		
Duplicate sample?:	Yes		
Duplicate canister no.:	33989		

Notes (barometric pressure reading and time, modifications to sample train, etc.):

BP: 29.7 PID = 0

temp = 65°C

Wind = from SE

Soil Vapor Sampling Field Form

Vapor Probe No.: SVP-11 **Date:** 3/31/03

Client: Solutia, Inc. **Site Location:** W.G. Krummrich Plant Sauget, IL

Samplers: M. Donzella

Volatile Organic Compound Sampling		SemiVolatile Organic Compound Sampling	
Pump No.	3579	*Pump No.:*	3534
Purge rate (cc/min):	200	*Purge rate (cc/min):*	150
Purge duration (min):	2	*Target purge duration (min)*	135
Purge volume (cc):		*Purge start time:*	1550
Canister No.:	31147	*Purge finish time:*	1805
Flow restrictor (min):	45	*Actual purge duration (min):*	135
Start time:	1503	*Sample no.:*	SVP-11
Start vacuum reading (mm Hg):	28.5	*Duplicate sample?:*	No
Finish time:	1548	*Duplicate sample no.:*	—
Finish vacuum reading (mm Hg):	8.5		
Tracer used?:	Yes		
Duplicate sample?:	No		
Duplicate canister no.:	—		

Notes (barometric pressure reading and time, modifications to sample train, etc.):

Wind from SE

Barometric Pressure - 29.65

Temp - 65

Soil Vapor Sampling Field Form

Vapor Probe No.: SVP-12 **Date:** 3/31/03

Client: Solutia, Inc. **Site Location:** W.G. Krummrich Plant Sauget, IL

Samplers: M. Donzella

Volatile Organic Compound Sampling		SemiVolatile Organic Compound Sampling	
Pump No.	3579	*Pump No.:*	0899
Purge rate (cc/min):	200	*Purge rate (cc/min):*	150
Purge duration (min):	2	*Target purge duration (min)*	135
Purge volume (cc):		*Purge start time:*	1043
Canister No.:	6993	*Purge finish time:*	1258
Flow restrictor (min):	45	*Actual purge duration (min):*	135
Start time:	9:56	*Sample no.:*	SVP-12
Start vacuum reading (mm Hg):	28.5	*Duplicate sample?:*	No
Finish time:	1041	*Duplicate sample no.:*	—
Finish vacuum reading (mm Hg):	8.5		
Tracer used?:	Yes		
Duplicate sample?:	No		
Duplicate canister no.:	—		

Notes (barometric pressure reading and time, modifications to sample train, etc.):

Barometric pressure - 29.8

Temp - 58 Strong sulfur odor

Wind from SE in the air

Soil Vapor Sampling Field Form

Vapor Probe No.: SVP - 14 **Date:** 4 / 1 / 03

Client: Solutia, Inc. **Site Location:** W.G. Krummrich Plant Sauget, IL

Samplers: M. Donzella

Volatile Organic Compound Sampling		SemiVolatile Organic Compound Sampling	
Pump No.	0899	*Pump No.:*	3187 / 344
Purge rate (cc/min):	200	*Purge rate (cc/min):*	75
Purge duration (min):	2	*Target purge duration (min)*	270
Purge volume (cc):		*Purge start time:*	919
Canister No.:	9563	*Purge finish time:*	1349
Flow restrictor (min):	60	*Actual purge duration (min):*	270
Start time:	816	*Sample no.:*	SVP - 14
Start vacuum reading (mm Hg):	29 / 26	*Duplicate sample?:*	Yes
Finish time:	916	*Duplicate sample no.:*	SVP - 140
Finish vacuum reading (mm Hg):	8.5 / 4		
Tracer used?:	Yes		
Duplicate sample?:	Yes		
Duplicate canister no.:	20935		

Notes (barometric pressure reading and time, modifications to sample train, etc.):

Barom. Press. — 29.5 PID - Ø

Temp. - 65

Wind from SE

Soil Vapor Sampling Field Form

Vapor Probe No.: SVP-15 **Date:** 3/31/03

Client: Solutia, Inc. **Site Location:** W.G. Krummrich Plant Sauget, IL

Samplers: KLi ML

Volatile Organic Compound Sampling		SemiVolatile Organic Compound Sampling	
Pump No.	3579	*Pump No.:*	3546 ~~3575~~
Purge rate (cc/min):	200	*Purge rate (cc/min):*	150
Purge duration (min):	2	*Target purge duration (min)*	135
Purge volume (cc):		*Purge start time:*	1149
Canister No.:	20997	*Purge finish time:*	1404
Flow restrictor (min):	45	*Actual purge duration (min):*	135
Start time:	1100	*Sample no.:*	SVP-15-SG-033103
Start vacuum reading (mm Hg):	29.0	*Duplicate sample?:*	N
Finish time:	1145	*Duplicate sample no.:*	—
Finish vacuum reading (mm Hg):	9.0		
Tracer used?:	Yes		
Duplicate sample?:	N		
Duplicate canister no.:	—		

Notes (barometric pressure reading and time, modifications to sample train, etc.):

Wind from SE

temp = 60°F

barometric pressure = 29.80

Soil Vapor Sampling Field Form

Vapor Probe No.: SVP-16 **Date:** 3/31/03

Client: Solutia, Inc. **Site Location:** W.G. Krummrich Plant Sauget, IL

Samplers: KL, ML, MD, DR

Volatile Organic Compound Sampling		SemiVolatile Organic Compound Sampling	
Pump No.	3579	*Pump No.:*	3534
Purge rate (cc/min):	200	*Purge rate (cc/min):*	150
Purge duration (min):	2	*Target purge duration (min)*	135
Purge volume (cc):		*Purge start time:*	1022
Canister No.:	1621	*Purge finish time:*	1237
Flow restrictor (min):	45	*Actual purge duration (min):*	135
Start time:	0937	*Sample no.:*	SVP-16-SG-033103
Start vacuum reading (mm Hg):	29.0	*Duplicate sample?:*	N
Finish time:	1022	*Duplicate sample no.:*	—
Finish vacuum reading (mm Hg):	8.5	Barometric pressure: 29.8 temp: 58°F	
Tracer used?:	Yes		
Duplicate sample?:	N		
Duplicate canister no.:	—		

Notes (barometric pressure reading and time, modifications to sample train, etc.):

Wind from SE

Soil Vapor Sampling Field Form

Vapor Probe No.: SVP-17 **Date:** 4/1/03

Client: Solutia, Inc. **Site Location:** W.G. Krummrich Plant Sauget, IL

Samplers: KL & ML

Volatile Organic Compound Sampling		SemiVolatile Organic Compound Sampling	
Pump No.	3579	*Pump No.:*	3181
Purge rate (cc/min):	200	*Purge rate (cc/min):*	150
Purge duration (min):	2	*Target purge duration (min)*	135
Purge volume (cc):		*Purge start time:*	0952
Canister No.:	~~11015~~ R-5 ~~10-1744~~	*Purge finish time:*	1207
Flow restrictor (min):	45	*Actual purge duration (min):*	135
Start time:	~~0825~~ 0900	*Sample no.:*	SVP-17-SG-040103
Start vacuum reading (mm Hg):	~~29~~ 31	*Duplicate sample?:*	N
Finish time:	~~0940~~ ~~0845~~ 0850	*Duplicate sample no.:*	—
Finish vacuum reading (mm Hg):	9	* Canister lost pressure after 30 min. Replace w/ new canister & collect for 45 min again	
Tracer used?:	Yes		
Duplicate sample?:	N		
Duplicate canister no.:	—		

Notes (barometric pressure reading and time, modifications to sample train, etc.):

BP: 29.5 PID= 0

Temp = 66°C

Wind from SW

Soil Vapor Sampling Field Form: Probe#_____

Sample No.: SVP-18-040203 **Date:** 4/2/03

Client: Solutia, Inc. **Site Location:** W.G. Krummrich Plant Sauget, IL

Samplers: KL & ML

Volatile Organic Compound Sampling		SemiVolatile Organic Compound Sampling	
Pump No.	3579	*Pump No.:*	
Purge rate (cc/min):	200	*Purge rate (cc/min):*	
Purge duration (min):	5	*Target purge duration (min)*	
Purge volume (cc):		*Purge start time:*	
Canister No.:	9583	*Purge finish time:*	
Flow restrictor (min):	45	*Actual purge duration (min):*	
Start time:	0901	*Sample no.:*	
Start vacuum reading (mm Hg):	28.5	*Duplicate sample?:*	
Finish time:	0946	*Duplicate sample no.:*	
Finish vacuum reading (mm Hg):	8.0		
Tracer used?:	Yes		
Duplicate sample?:	N		
Duplicate canister no.:	—		

Notes (ambient temperature, barometric pressure reading and time, modifications to sample train, etc.):

BP = 29.55 PID = 0.9

temp = 63° probe depth = 6'

Wind = from south

Soil Vapor Sampling Field Form: Probe# SVP-19

Sample No.: SVP-19-SG-040203 **Date:** 4/2/03

Client: Solutia, Inc. **Site Location:** W.G. Krummrich Plant Sauget, IL

Samplers: KL SM

Volatile Organic Compound Sampling		SemiVolatile Organic Compound Sampling	
Pump No.	3579	*Pump No.:*	
Purge rate (cc/min):	200	*Purge rate (cc/min):*	
Purge duration (min):	5	*Target purge duration (min)*	
Purge volume (cc):		*Purge start time:*	
Canister No.:	21211	*Purge finish time:*	
Flow restrictor (min):	45	*Actual purge duration (min):*	
Start time:	1025	*Sample no.:*	
Start vacuum reading (mm Hg):	28.5	*Duplicate sample?:*	
Finish time:	1110	*Duplicate sample no.:*	
Finish vacuum reading (mm Hg):	~~110~~ 8.0		
Tracer used?:	Yes		
Duplicate sample?:	N		
Duplicate canister no.:	—		

Notes (ambient temperature, barometric pressure reading and time, modifications to sample train, etc.):

BP = 29.55 PID = 0

Temp: 68 Probe to 6'

Wind from South

Soil Vapor Sampling Field Form: Probe# SVP-20

Sample No.: SVP-20-Sa-040203 **Date:** 4/2/03

Client: Solutia, Inc. **Site Location:** W.G. Krummrich Plant Sauget, IL

Samplers: KL & ML

Volatile Organic Compound Sampling		SemiVolatile Organic Compound Sampling	
Pump No.	3579	*Pump No.:*	
Purge rate (cc/min):	200	*Purge rate (cc/min):*	
Purge duration (min):	5	*Target purge duration (min)*	
Purge volume (cc):		*Purge start time:*	
Canister No.:	9916	*Purge finish time:*	
Flow restrictor (min):	45	*Actual purge duration (min):*	
Start time:	1054	*Sample no.:*	
Start vacuum reading (mm Hg):	29.0	*Duplicate sample?:*	
Finish time:	1139	*Duplicate sample no.:*	
Finish vacuum reading (mm Hg):	8.5		
Tracer used?:	Y		
Duplicate sample?:	N		
Duplicate canister no.:	–		

Notes (ambient temperature, barometric pressure reading and time, modifications to sample train, etc.):

BP = 29.55 PID = Ø

Temp = 71 Probe to 6'

Wind from South

Soil Vapor Sampling Field Form: Probe# SVP-21-SG

Sample No.: SVP-21-SG-040203 **Date:** 4/2/03

Client: Solutia, Inc. **Site Location:** W.G. Krummrich Plant Sauget, IL

Samplers: KL & ML

Volatile Organic Compound Sampling		SemiVolatile Organic Compound Sampling	
Pump No.	3579	*Pump No.:*	
Purge rate (cc/min):	200	*Purge rate (cc/min):*	
Purge duration (min):	5	*Target purge duration (min)*	
Purge volume (cc):		*Purge start time:*	
Canister No.:	13658	*Purge finish time:*	
Flow restrictor (min):	45	*Actual purge duration (min):*	
Start time:	1223	*Sample no.:*	
Start vacuum reading (mm Hg):	29.0	*Duplicate sample?:*	
Finish time:	1308	*Duplicate sample no.:*	
Finish vacuum reading (mm Hg):	8.5		
Tracer used?:	YES		
Duplicate sample?:	N		
Duplicate canister no.:	—		

Notes (ambient temperature, barometric pressure reading and time, modifications to sample train, etc.):

Temp = 71°F PID = 0

BP = 29.55 Probe to 6'

Wind from South

Soil Vapor Sampling Field Form: Probe# SVP-22

Sample No.: SVP-22-SG-040203 **Date:** 4/2/03

Client: Solutia, Inc. **Site Location:** W.G. Krummrich Plant Sauget, IL

Samplers: KL, ML

Volatile Organic Compound Sampling		SemiVolatile Organic Compound Sampling	
Pump No.	3579	*Pump No.:*	
Purge rate (cc/min):	200	*Purge rate (cc/min):*	
Purge duration (min):	5	*Target purge duration (min)*	
Purge volume (cc):		*Purge start time:*	
Canister No.:	33871	*Purge finish time:*	
Flow restrictor (min):	45	*Actual purge duration (min):*	
Start time:	1304	*Sample no.:*	
Start vacuum reading (mm Hg):	28	*Duplicate sample?:*	
Finish time:	1349	*Duplicate sample no.:*	
Finish vacuum reading (mm Hg):	8		
Tracer used?:	YES		
Duplicate sample?:	N		
Duplicate canister no.:	—		

Notes (ambient temperature, barometric pressure reading and time, modifications to sample train, etc.):

BP = 29.55 PID = Ø

Temp = 71 Probe to 6'

Wind from SE

Soil Vapor Sampling Field Form: Probe# SVP-23 (AMBIENT AIR)

Sample No.: SVP-23-SG-040203 **Date:** 4/2/03

Client: Solutia, Inc. **Site Location:** W.G. Krummrich Plant Sauget, IL

Samplers: KL & ML

Volatile Organic Compound Sampling		SemiVolatile Organic Compound Sampling	
Pump No.	X	*Pump No.:*	
Purge rate (cc/min):	X	*Purge rate (cc/min):*	
Purge duration (min):	X	*Target purge duration (min)*	
Purge volume (cc):	X	*Purge start time:*	
Canister No.:	14889	*Purge finish time:*	
Flow restrictor (min):	45	*Actual purge duration (min):*	
Start time:	1218	*Sample no.:*	
Start vacuum reading (mm Hg):	29.5	*Duplicate sample?:*	
Finish time:	1303	*Duplicate sample no.:*	
Finish vacuum reading (mm Hg):	9		
Tracer used?:	N		
Duplicate sample?:	N		
Duplicate canister no.:	—		

Notes (ambient temperature, barometric pressure reading and time, modifications to sample train, etc.):

Temp = 71°F PID = 9

BP = 29.55

Windfrm S

Soil Vapor Sampling Field Form

033103

Vapor Probe No.: BACKGROUND SAMPLE **Date:** 3/31/03

Client: Solutia, Inc. **Site Location:** W.G. Krummrich Plant
Sauget, IL

Samplers: KL & ML

Volatile Organic Compound Sampling		SemiVolatile Organic Compound Sampling	
Pump No.	—	*Pump No.:*	8850
Purge rate (cc/min):	—	*Purge rate (cc/min):*	150
Purge duration (min):	—	*Target purge duration (min)*	135
Purge volume (cc):	—	*Purge start time:*	1552
Canister No.:	9947	*Purge finish time:*	1807
Flow restrictor (min):	45	*Actual purge duration (min):*	135
Start time:	1502	*Sample no.:*	Background Sample 033103
Start vacuum reading (mm Hg):	28	*Duplicate sample?:*	—
Finish time:	1547	*Duplicate sample no.:*	—
Finish vacuum reading (mm Hg):	7.5		
Tracer used?:	Yes		
Duplicate sample?:	—		
Duplicate canister no.:	—		

Notes (barometric pressure reading and time, modifications to sample train, etc.):

Temp = 60°F PID = 0

BP = 29.65

Wind from S

Soil Vapor Sampling Field Form

Vapor Probe No.: Background Air Sample 040103-AM **Date:** 4/1/03

Client: Solutia, Inc. **Site Location:** W.G. Krummrich Plant Sauget, IL

Samplers: KL & ML

Volatile Organic Compound Sampling		SemiVolatile Organic Compound Sampling	
Pump No.		*Pump No.:*	8850
Purge rate (cc/min):		*Purge rate (cc/min):*	150
Purge duration (min):		*Target purge duration (min)*	135
Purge volume (cc):		*Purge start time:*	0909
Canister No.:	425	*Purge finish time:*	1124
Flow restrictor (min):	45	*Actual purge duration (min):*	135
Start time:	0823	*Sample no.:*	Background Air Sample 040103-AM
Start vacuum reading (mm Hg):	28.5	*Duplicate sample?:*	—
Finish time:	0908	*Duplicate sample no.:*	—
Finish vacuum reading (mm Hg):	8.0		
Tracer used?:	N		
Duplicate sample?:	—		
Duplicate canister no.:	—		

Notes (barometric pressure reading and time, modifications to sample train, etc.):

BP = 29.5 PID = 0

temp = 66° F

Wind = from SW

Soil Vapor Sampling Field Form

040103-PM

Vapor Probe No.: Background air sample **Date:** 4/1/03

Client: Solutia, Inc. **Site Location:** W.G. Krummrich Plant Sauget, IL

Samplers:

Volatile Organic Compound Sampling		SemiVolatile Organic Compound Sampling	
Pump No.		*Pump No.:*	3181
Purge rate (cc/min):		*Purge rate (cc/min):*	150
Purge duration (min):		*Target purge duration (min)*	135
Purge volume (cc):		*Purge start time:*	1246
Canister No.:	31151	*Purge finish time:*	1501
Flow restrictor (min):	45	*Actual purge duration (min):*	135
Start time:	1242	*Sample no.:*	
Start vacuum reading (mm Hg):	29	*Duplicate sample?:*	N
Finish time:	1327	*Duplicate sample no.:*	—
Finish vacuum reading (mm Hg):	8.5		
Tracer used?:	N		
Duplicate sample?:	N		
Duplicate canister no.:	—		

Notes (barometric pressure reading and time, modifications to sample train, etc.):

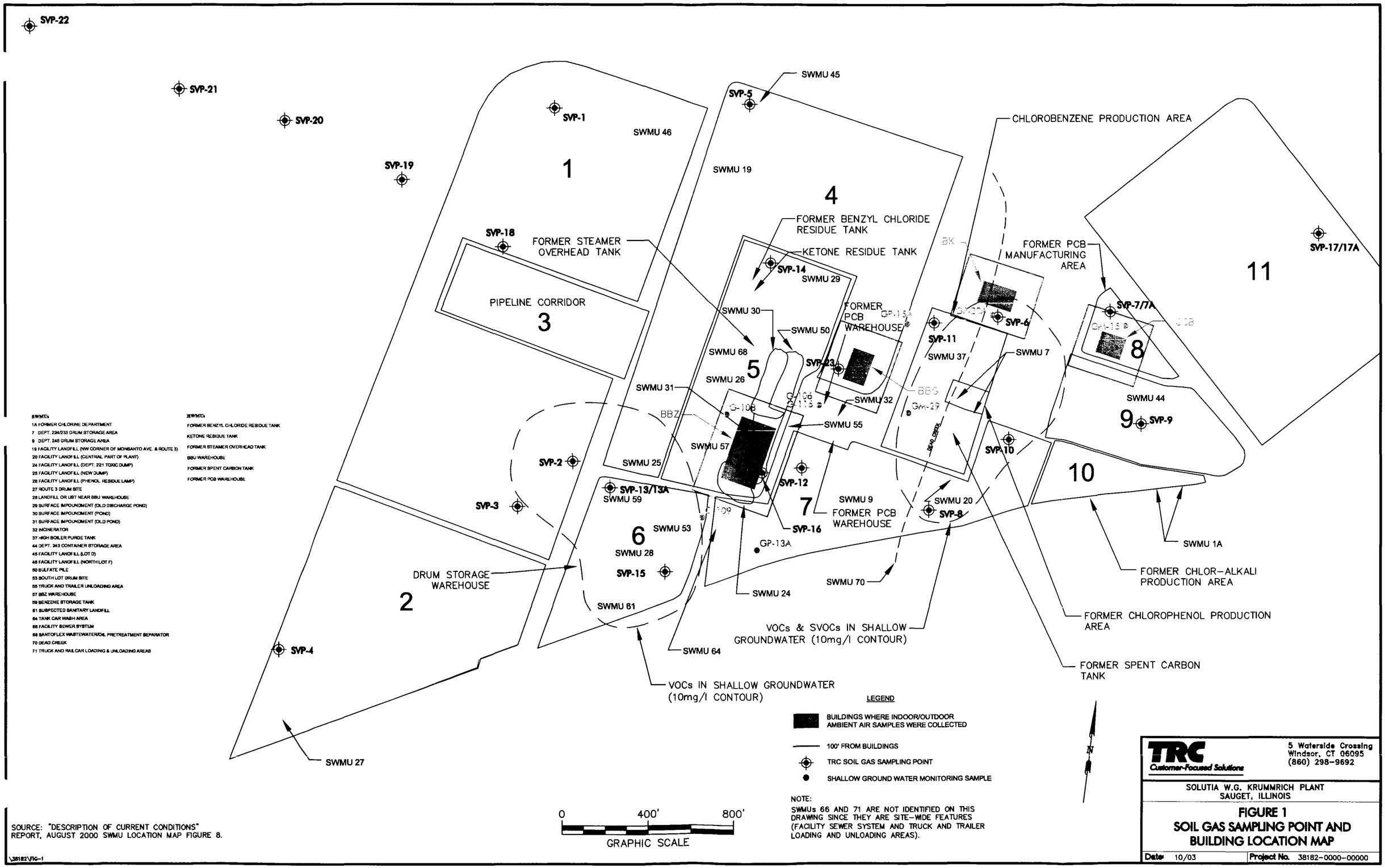
BP = 29.5 PID = 0

temp = 72

Wind = from S

Attachment B

Soil Gas Sampling Point and Building Location Map



SOURCE: "DESCRIPTION OF CURRENT CONDITIONS" REPORT, AUGUST 2000 SWMU LOCATION MAP FIGURE 8.

\38182\FIG-1

TRC Customer-Focused Solutions
5 Waterside Crossing
Windsor, CT 06095
(860) 298-9692

SOLUTIA W.G. KRUMMRICH PLANT
SAUGET, ILLINOIS

FIGURE 1
SOIL GAS SAMPLING POINT AND BUILDING LOCATION MAP

Date 10/03 | Project No. 38182-0000-00000

J:\Cad\38182\Fig-1.dwg, FIG-1, 12/10/2003 12:04:07 PM

Attachment C

Laboratory Reports

TO-15

AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Air Toxics Ltd. Introduces the Electronic Report

Thank you for choosing Air Toxics Ltd. To better serve our customers, we are providing your report by e-mail. This document is provided in Portable Document Format which can be viewed with Acrobat Reader by Adobe.

This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

(916) 985-1000 .FAX (916) 985-1020
Hours 8:00 A.M to 6:00 P.M. Pacific
E-mail to:samplereceiving@airtoxics.com

@ AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0304090

Work Order Summary

CLIENT:	Mr. Gary Ritter TRC Environmental Corporation 5 Waterside Crossing Windsor, CT 06095	**BILL TO:**	Mr. Gary Ritter TRC Environmental Corporation 5 Waterside Crossing Windsor, CT 06095
PHONE:	860-298-6300	**P.O. #**	
FAX:		**PROJECT #**	38182 Solutia/Sauget
DATE RECEIVED:	4/3/03	**CONTACT:**	Betty Chu
DATE COMPLETED:	4/15/03		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.
01A	SVP-18-SG-040203	Modified TO-15/TIC	9.5 "Hg
02A	SVP-19-SG-040203	Modified TO-15/TIC	9.0 "Hg
03A	SVP-20-SG-040203	Modified TO-15/TIC	9.5 "Hg
04A	SVP-21-SG-040203	Modified TO-15/TIC	9.5 "Hg
05A	SVP-22-SG-040203	Modified TO-15/TIC	9.0 "Hg
06A	SVP-23-SG-040203	Modified TO-15/TIC	9.5 "Hg
06AA	SVP-23-SG-040203 Duplicate	Modified TO-15/TIC	9.5 "Hg
07A	Lab Blank	Modified TO-15/TIC	NA
08A	CCV	Modified TO-15/TIC	NA
09A	LCS	Modified TO-15/TIC	NA

CERTIFIED BY: Linda A. Freeman DATE: 04/15/03

Laboratory Director

Certfication numbers: AR DEQ, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/02, Expiration date: 06/30/03
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified TO-15
TRC Environmental Corporation
Workorder# 0304090

Six 6 Liter Summa Canister samples were received on April 03, 2003. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.5 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

Requirement	*TO-15*	*ATL Modifications*
BFB acceptance criteria	CLP protocol	SW-846 protocol
Concentration of IS spike	10 ppbv	25 ppbv when 0.5/2.0 ppbv is used for the reporting limt
Dilutions for initial calibration	Dynamic dilutions or static using canisters	Syringe dilutions
IS recoveries	Within 40% of mean over ICAL for blanks, and w/in 40% of daily CCV for samples.	Within 40% of CCV recoveries for blank and samples.
Daily CCV	30% Difference	30% Difference with two allowed out up to 40%.
Primary ions for Quantification	Freon 114: 85, Carbon Tetrachloride: 117, Trichloroethene: 130, Ethyl Benzene, m,p- and o-Xylene: 91	Freon 114: 135, Carbon Tetrachloride: 119, Trichloroethene: 95, Ethyl Benzene, m,p- and o-Xylene: 106

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The reported CCV for each daily batch may be derived from more than one individual analytical file due to the client's request for non-standard compounds.

Specific analytes that are requested by the client to be reported as tentatively identified compounds (TICs) are determined by searching for each compound's characteristic spectra. If no chromatographic peak displaying the compound specific spectra exists, then the TIC is reported as not detected. Please note that the laboratory has not evaluated the stability of any heretofore tentatively identified compound in the vapor phase or for efficiency of recovery through the analytical system.

By specific client request, Tetrafluoroethane was reported as a tentatively identified compound (TIC) to assist in evaluation of the client sampling system.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated Peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: SVP-18-SG-040203

ID#: 0304090-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d040324	Date of Collection: 4/2/03
Dil. Factor:	1.96	Date of Analysis: 4/4/03

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.98	2.5	Not Detected	Not Detected
Methylene Chloride	0.98	3.5	Not Detected	Not Detected
1,1-Dichloroethane	0.98	4.0	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.98	3.9	Not Detected	Not Detected
Chloroform	0.98	4.9	Not Detected	Not Detected
1,1,1-Trichloroethane	0.98	5.4	Not Detected	Not Detected
Benzene	0.98	3.2	Not Detected	Not Detected
1,2-Dichloroethane	0.98	4.0	Not Detected	Not Detected
Trichloroethene	0.98	5.4	Not Detected	Not Detected
Tetrachloroethene	0.98	6.8	Not Detected	Not Detected
Chlorobenzene	0.98	4.6	Not Detected	Not Detected
alpha-Chlorotoluene	0.98	5.2	Not Detected	Not Detected
Acetone	3.9	9.5	6.3	15
Carbon Disulfide	3.9	12	Not Detected	Not Detected
trans-1,2-Dichloroethene	3.9	16	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.9	12	8.4	25
Bromodichloromethane	3.9	27	Not Detected	Not Detected
4-Methyl-2-pentanone	3.9	16	Not Detected	Not Detected
Bromoform	3.9	41	Not Detected	Not Detected
tert-Butylbenzene	3.9	22	Not Detected	Not Detected
Naphthalene	20	100	Not Detected	Not Detected
1,2-Dichlorobenzene	0.98	6.0	Not Detected	Not Detected
1,4-Dichlorobenzene	0.98	6.0	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	BLNK01	NA	9.6

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	93	70-130

AIR TOXICS LTD.

SAMPLE NAME: SVP-19-SG-040203

ID#: 0304090-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d040325	Date of Collection: 4/2/03
Dil. Factor:	1.91	Date of Analysis: 4/4/03

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.96	2.5	Not Detected	Not Detected
Methylene Chloride	0.96	3.4	Not Detected	Not Detected
1,1-Dichloroethane	0.96	3.9	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.96	3.8	Not Detected	Not Detected
Chloroform	0.96	4.7	Not Detected	Not Detected
1,1,1-Trichloroethane	0.96	5.3	Not Detected	Not Detected
Benzene	0.96	3.1	Not Detected	Not Detected
1,2-Dichloroethane	0.96	3.9	Not Detected	Not Detected
Trichloroethene	0.96	5.2	Not Detected	Not Detected
Tetrachloroethene	0.96	6.6	Not Detected	Not Detected
Chlorobenzene	0.96	4.5	Not Detected	Not Detected
alpha-Chlorotoluene	0.96	5.0	Not Detected	Not Detected
Acetone	3.8	9.2	5.6	13
Carbon Disulfide	3.8	12	Not Detected	Not Detected
trans-1,2-Dichloroethene	3.8	15	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.8	11	11	33
Bromodichloromethane	3.8	26	Not Detected	Not Detected
4-Methyl-2-pentanone	3.8	16	Not Detected	Not Detected
Bromoform	3.8	40	Not Detected	Not Detected
tert-Butylbenzene	3.8	21	Not Detected	Not Detected
Naphthalene	19	100	Not Detected	Not Detected
1,2-Dichlorobenzene	0.96	5.8	Not Detected	Not Detected
1,4-Dichlorobenzene	0.96	5.8	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	BLNK01	NA	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	92	70-130

AIR TOXICS LTD.

SAMPLE NAME: SVP-20-SG-040203

ID#: 0304090-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d040326	Date of Collection:	4/2/03
Dil. Factor:	1.96	Date of Analysis:	4/4/03

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.98	2.5	Not Detected	Not Detected
Methylene Chloride	0.98	3.5	Not Detected	Not Detected
1,1-Dichloroethane	0.98	4.0	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.98	3.9	Not Detected	Not Detected
Chloroform	0.98	4.9	Not Detected	Not Detected
1,1,1-Trichloroethane	0.98	5.4	Not Detected	Not Detected
Benzene	0.98	3.2	Not Detected	Not Detected
1,2-Dichloroethane	0.98	4.0	Not Detected	Not Detected
Trichloroethene	0.98	5.4	Not Detected	Not Detected
Tetrachloroethene	0.98	6.8	Not Detected	Not Detected
Chlorobenzene	0.98	4.6	Not Detected	Not Detected
alpha-Chlorotoluene	0.98	5.2	Not Detected	Not Detected
Acetone	3.9	9.5	4.2	10
Carbon Disulfide	3.9	12	Not Detected	Not Detected
trans-1,2-Dichloroethene	3.9	16	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.9	12	5.5	16
Bromodichloromethane	3.9	27	Not Detected	Not Detected
4-Methyl-2-pentanone	3.9	16	Not Detected	Not Detected
Bromoform	3.9	41	Not Detected	Not Detected
tert-Butylbenzene	3.9	22	Not Detected	Not Detected
Naphthalene	20	100	Not Detected	Not Detected
1,2-Dichlorobenzene	0.98	6.0	Not Detected	Not Detected
1,4-Dichlorobenzene	0.98	6.0	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	BLNK01	NA	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	93	70-130

AIR TOXICS LTD.

SAMPLE NAME: SVP-21-SG-040203

ID#: 0304090-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d040327	Date of Collection:	4/2/03
Dil. Factor:	1.96	Date of Analysis:	4/4/03

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.98	2.5	Not Detected	Not Detected
Methylene Chloride	0.98	3.5	Not Detected	Not Detected
1,1-Dichloroethane	0.98	4.0	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.98	3.9	Not Detected	Not Detected
Chloroform	0.98	4.9	Not Detected	Not Detected
1,1,1-Trichloroethane	0.98	5.4	Not Detected	Not Detected
Benzene	0.98	3.2	Not Detected	Not Detected
1,2-Dichloroethane	0.98	4.0	Not Detected	Not Detected
Trichloroethene	0.98	5.4	Not Detected	Not Detected
Tetrachloroethene	0.98	6.8	Not Detected	Not Detected
Chlorobenzene	0.98	4.6	Not Detected	Not Detected
alpha-Chlorotoluene	0.98	5.2	Not Detected	Not Detected
Acetone	3.9	9.5	12	28
Carbon Disulfide	3.9	12	Not Detected	Not Detected
trans-1,2-Dichloroethene	3.9	16	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.9	12	Not Detected	Not Detected
Bromodichloromethane	3.9	27	Not Detected	Not Detected
4-Methyl-2-pentanone	3.9	16	Not Detected	Not Detected
Bromoform	3.9	41	Not Detected	Not Detected
tert-Butylbenzene	3.9	22	Not Detected	Not Detected
Naphthalene	20	100	Not Detected	Not Detected
1,2-Dichlorobenzene	0.98	6.0	Not Detected	Not Detected
1,4-Dichlorobenzene	0.98	6.0	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	BLNK01	NA	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	94	70-130

AIR TOXICS LTD.

SAMPLE NAME: SVP-22-SG-040203

ID#: 0304090-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d040328	Date of Collection: 4/2/03
Dil. Factor:	1.91	Date of Analysis: 4/4/03

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.96	2.5	Not Detected	Not Detected
Methylene Chloride	0.96	3.4	Not Detected	Not Detected
1,1-Dichloroethane	0.96	3.9	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.96	3.8	Not Detected	Not Detected
Chloroform	0.96	4.7	Not Detected	Not Detected
1,1,1-Trichloroethane	0.96	5.3	Not Detected	Not Detected
Benzene	0.96	3.1	Not Detected	Not Detected
1,2-Dichloroethane	0.96	3.9	Not Detected	Not Detected
Trichloroethene	0.96	5.2	Not Detected	Not Detected
Tetrachloroethene	0.96	6.6	Not Detected	Not Detected
Chlorobenzene	0.96	4.5	Not Detected	Not Detected
alpha-Chlorotoluene	0.96	5.0	Not Detected	Not Detected
Acetone	3.8	9.2	9.0	22
Carbon Disulfide	3.8	12	Not Detected	Not Detected
trans-1,2-Dichloroethene	3.8	15	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.8	11	8.0	24
Bromodichloromethane	3.8	26	Not Detected	Not Detected
4-Methyl-2-pentanone	3.8	16	Not Detected	Not Detected
Bromoform	3.8	40	Not Detected	Not Detected
tert-Butylbenzene	3.8	21	Not Detected	Not Detected
Naphthalene	19	100	Not Detected	Not Detected
1,2-Dichlorobenzene	0.96	5.8	Not Detected	Not Detected
1,4-Dichlorobenzene	0.96	5.8	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	BLNK01	NA	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	95	70-130

AIR TOXICS LTD.

SAMPLE NAME: SVP-23-SG-040203

ID#: 0304090-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d040329	Date of Collection: 4/2/03
Dil. Factor:	1.96	Date of Analysis: 4/4/03

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.98	2.5	Not Detected	Not Detected
Methylene Chloride	0.98	3.5	7.6	27
1,1-Dichloroethane	0.98	4.0	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.98	3.9	Not Detected	Not Detected
Chloroform	0.98	4.9	Not Detected	Not Detected
1,1,1-Trichloroethane	0.98	5.4	Not Detected	Not Detected
Benzene	0.98	3.2	Not Detected	Not Detected
1,2-Dichloroethane	0.98	4.0	Not Detected	Not Detected
Trichloroethene	0.98	5.4	Not Detected	Not Detected
Tetrachloroethene	0.98	6.8	Not Detected	Not Detected
Chlorobenzene	0.98	4.6	Not Detected	Not Detected
alpha-Chlorotoluene	0.98	5.2	Not Detected	Not Detected
Acetone	3.9	9.5	19	46
Carbon Disulfide	3.9	12	Not Detected	Not Detected
trans-1,2-Dichloroethene	3.9	16	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.9	12	Not Detected	Not Detected
Bromodichloromethane	3.9	27	Not Detected	Not Detected
4-Methyl-2-pentanone	3.9	16	Not Detected	Not Detected
Bromoform	3.9	41	Not Detected	Not Detected
tert-Butylbenzene	3.9	22	Not Detected	Not Detected
Naphthalene	20	100	Not Detected	Not Detected
1,2-Dichlorobenzene	0.98	6.0	Not Detected	Not Detected
1,4-Dichlorobenzene	0.98	6.0	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	BLNK01	NA	10

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	93	70-130

AIR TOXICS LTD.

SAMPLE NAME: SVP-23-SG-040203 Duplicate

ID#: 0304090-06AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d040430	Date of Collection:	4/2/03
Dil. Factor:	1.96	Date of Analysis:	4/4/03

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.98	2.5	Not Detected	Not Detected
Methylene Chloride	0.98	3.5	7.3	26
1,1-Dichloroethane	0.98	4.0	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.98	3.9	Not Detected	Not Detected
Chloroform	0.98	4.9	Not Detected	Not Detected
1,1,1-Trichloroethane	0.98	5.4	Not Detected	Not Detected
Benzene	0.98	3.2	Not Detected	Not Detected
1,2-Dichloroethane	0.98	4.0	Not Detected	Not Detected
Trichloroethene	0.98	5.4	Not Detected	Not Detected
Tetrachloroethene	0.98	6.8	Not Detected	Not Detected
Chlorobenzene	0.98	4.6	Not Detected	Not Detected
alpha-Chlorotoluene	0.98	5.2	Not Detected	Not Detected
Acetone	3.9	9.5	18	44
Carbon Disulfide	3.9	12	Not Detected	Not Detected
trans-1,2-Dichloroethene	3.9	16	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.9	12	Not Detected	Not Detected
Bromodichloromethane	3.9	27	Not Detected	Not Detected
4-Methyl-2-pentanone	3.9	16	Not Detected	Not Detected
Bromoform	3.9	41	Not Detected	Not Detected
tert-Butylbenzene	3.9	22	Not Detected	Not Detected
Naphthalene	20	100	Not Detected	Not Detected
1,2-Dichlorobenzene	0.98	6.0	Not Detected	Not Detected
1,4-Dichlorobenzene	0.98	6.0	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	BLNK01	NA	8.5

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	92	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0304090-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**d040307**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/3/03**	

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.50	1.3	Not Detected	Not Detected
Methylene Chloride	0.50	1.8	Not Detected	Not Detected
1,1-Dichloroethane	0.50	2.0	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.50	2.0	Not Detected	Not Detected
Chloroform	0.50	2.5	Not Detected	Not Detected
1,1,1-Trichloroethane	0.50	2.8	Not Detected	Not Detected
Benzene	0.50	1.6	Not Detected	Not Detected
1,2-Dichloroethane	0.50	2.0	Not Detected	Not Detected
Trichloroethene	0.50	2.7	Not Detected	Not Detected
Tetrachloroethene	0.50	3.4	Not Detected	Not Detected
Chlorobenzene	0.50	2.3	Not Detected	Not Detected
alpha-Chlorotoluene	0.50	2.6	Not Detected	Not Detected
Acetone	2.0	4.8	Not Detected	Not Detected
Carbon Disulfide	2.0	6.3	Not Detected	Not Detected
trans-1,2-Dichloroethene	2.0	8.0	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	6.0	Not Detected	Not Detected
Bromodichloromethane	2.0	14	Not Detected	Not Detected
4-Methyl-2-pentanone	2.0	8.3	Not Detected	Not Detected
Bromoform	2.0	21	Not Detected	Not Detected
tert-Butylbenzene	2.0	11	Not Detected	Not Detected
Naphthalene	10	53	Not Detected	Not Detected
1,2-Dichlorobenzene	0.50	3.0	Not Detected	Not Detected
1,4-Dichlorobenzene	0.50	3.0	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	BLNK01	NA	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	95	70-130

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0304090-08A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d040302	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 4/3/03	

Compound	%Recovery
Vinyl Chloride	87
Methylene Chloride	84
1,1-Dichloroethane	88
cis-1,2-Dichloroethene	88
Chloroform	88
1,1,1-Trichloroethane	91
Benzene	88
1,2-Dichloroethane	88
Trichloroethene	88
Tetrachloroethene	92
Chlorobenzene	90
alpha-Chlorotoluene	85
Acetone	94
Carbon Disulfide	89
trans-1,2-Dichloroethene	89
2-Butanone (Methyl Ethyl Ketone)	92
Bromodichloromethane	96
4-Methyl-2-pentanone	96
Bromoform	99
tert-Butylbenzene	108
Naphthalene	91
1,2-Dichlorobenzene	85
1,4-Dichlorobenzene	87

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	97	70-130

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0304090-09A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d040303	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 4/3/03	

Compound	%Recovery
Vinyl Chloride	90
Methylene Chloride	80
1,1-Dichloroethane	75
cis-1,2-Dichloroethene	85
Chloroform	82
1,1,1-Trichloroethane	83
Benzene	90
1,2-Dichloroethane	86
Trichloroethene	89
Tetrachloroethene	90
Chlorobenzene	86
alpha-Chlorotoluene	95
Acetone	88
Carbon Disulfide	86
trans-1,2-Dichloroethene	91
2-Butanone (Methyl Ethyl Ketone)	86
Bromodichloromethane	84
4-Methyl-2-pentanone	87
Bromoform	82
tert-Butylbenzene	Not Spiked
Naphthalene	Not Spiked
1,2-Dichlorobenzene	83
1,4-Dichlorobenzene	81

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	BLNK01	NA	Not Spiked

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	98	70-130

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CHAIN-OF-CUSTODY RECORD

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FOLSOM, CA 95630-4719
(916) 985-1000 FAX: (916) 985-1020

Contact Person: MIKE SUSCA
Company: TRC Environmental
Address: 5 Waterside Crossing City: Windsor State: CT Zip: 06095
Phone: (860)298-6234 FAX: (860)298-6399
Collected By: Signature: [signature]

Project info:
P.O. #
Project #: 38182
Project Name: Solutia/Sunset

Turn Around Time:
☐ Normal
☒ Rush: See notes (Specify)

ST 4-3-03

Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested	Canister Pressure / Vacuum Initial	Final	Receipt
01A ~~04A~~	SVP-18-SG-040203	4/2/03 — 0946	TO-15 Reporting list previously submitted	28.5	8.0	9.5 Hg
02A ~~05A~~	SVP-19-SG-040203	4/2/03 — 1110	TO-15 " "	28.5	8.0	9.0 Hg
03A ~~06A~~	SVP-20-SG-040203	4/2/03 — 1139	TO-15 " "	29.0	8.5	8.5 Hg
04A ~~07A~~	SVP-21-SG-040203	4/2/03 — 1308	TO-15 " "	29.0	8.5	7.5 Hg
TK 4/3/03						

Relinquished By: (Signature) Date/Time: [signature] 4/2/03 1430
Received By: (Signature) Date/Time:
Relinquished By: (Signature) Date/Time:
Received By: (Signature) Date/Time:
Relinquished By: (Signature) Date/Time:
Received By: (Signature) Date/Time: Tony Bachel ATL 4/3/03 935

Notes:
48 hr TAT on analysis
Standard TAT on report (include complete data validation package)

Lab Use Only	Shipper Name	Air Bill #	Opened By:	Temp. (°C)	Condition	Custody Seals Intact?	Work Order #
	FedEx	8369 8665 1787	TB	—	Good	(Yes) No None	0304090

Form 1293 rev. 09

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FOLSOM, CA 95630-4719
(916) 985-1000 FAX: (916) 985-1020

Contact Person: Mike Sussa
Company: TRC Environmental
Address: 5 Waterside Crossing City: Windsor State: CT Zip: 06095
Phone: (860) 298-6234 FAX: (860) 298-6399
Collected By: Signature: Kate Launer

Project info:
P.O. #:
Project #: 38182
Project Name: Shultz/Sawyer

Turn Around Time:
☐ Normal
☒ Rush: See notes (Specify)

Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested	Canister Pressure / Vacuum: Initial	Final	Receipt
06A 09A	SVP-22-SG-040203	4/2/03 - 1349	TO-15 - refer to analyte list previously submitted	28.0	8.0	9.0
06A 09A	SVP-23-SG-040203	4/2/03 - 1303	TO-15 - " "	29.5	9.0	9.5

ES 4-3-3

Relinquished By: (Signature) Date/Time: Kate Launer 4/2/03 1435
Received By: (Signature) Date/Time: Laura Thomas ATL 4/3/03 920
Relinquished By: (Signature) Date/Time:
Received By: (Signature) Date/Time:

Notes:
48hr TAT on analysis
Standard TAT on report
(include data validation package)

Lab Use Only	Shipper Name	Air Bill #	Opened By:	Temp. (°C)	Condition	Custody Seals Intact?	Work Order #
	FedEx	9369 8665 1782	KB	—	Good	(Yes) No None	0304090

Form 200 rev 3.3

AIR TOXICS LTD.

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Thank you for choosing Air Toxics Ltd. To better serve our customers, we are providing your report by e-mail. This document is provided in Portable Document Format which can be viewed with Acrobat Reader by Adobe.

This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

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E-mail to:samplereceiving@airtoxics.com

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WORK ORDER #: 0304034

Work Order Summary

CLIENT:	Mr. Gary Ritter TRC Environmental Corporation 5 Waterside Crossing Windsor, CT 06095	**BILL TO:**	Mr. Gary Ritter TRC Environmental Corporation 5 Waterside Crossing Windsor, CT 06095
PHONE:	860-298-6300	**P.O. #**	
FAX:		**PROJECT #**	38182 Solutia/Sauget
DATE RECEIVED:	4/2/03	**CONTACT:**	Betty Chu
DATE COMPLETED:	4/15/03		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.
01A	SVP-5-SG-040103	Modified TO-15/TIC	8.5 "Hg
02A	SVP-14-SG-040103	Modified TO-15/TIC	9.5 "Hg
03A	SVP-17-SG-040103	Modified TO-15/TIC	7.5 "Hg
04A	SVP-140-SG-040103	Modified TO-15/TIC	9.0 "Hg
05A	SVP-1-SG-040103	Modified TO-15/TIC	9.5 "Hg
06A	SVP-2-SG-040103	Modified TO-15/TIC	9.5 "Hg
07A	SVP-3-SG-040103	Modified TO-15/TIC	9.0 "Hg
08A	SVP-4-SG-040103	Modified TO-15/TIC	9.0 "Hg
08AA	SVP-4-SG-040103 Duplicate	Modified TO-15/TIC	9.0 "Hg
09A	Background Air Sample-040103-AM	Modified TO-15/TIC	9.0 "Hg
10A	Background Air Sample-040103-PM	Modified TO-15/TIC	7.0 "Hg
11A	Trip Blank 040103	Modified TO-15/TIC	29.0 "Hg
12A	Lab Blank	Modified TO-15/TIC	NA
12B	Lab Blank	Modified TO-15/TIC	NA
12C	Lab Blank	Modified TO-15/TIC	NA
13A	CCV	Modified TO-15/TIC	NA
13B	CCV	Modified TO-15/TIC	NA
13C	CCV	Modified TO-15/TIC	NA
14A	LCS	Modified TO-15/TIC	NA
14B	LCS	Modified TO-15/TIC	NA

Continued on next page

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AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0304034

Work Order Summary

CLIENT:	Mr. Gary Ritter TRC Environmental Corporation 5 Waterside Crossing Windsor, CT 06095	**BILL TO:**	Mr. Gary Ritter TRC Environmental Corporation 5 Waterside Crossing Windsor, CT 06095
PHONE:	860-298-6300	**P.O. #**	
FAX:		**PROJECT #**	38182 Solutia/Sauget
DATE RECEIVED:	4/2/03	**CONTACT:**	Betty Chu
DATE COMPLETED:	4/15/03		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.
14C	LCS	Modified TO-15/TIC	NA

CERTIFIED BY: Linda A. Truman DATE: 04/15/03

Laboratory Director

Certfication numbers: AR DEQ, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/02, Expiration date: 06/30/03
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified TO-15
TRC Environmental Corporation
Workorder# 0304034

Eleven 6 Liter Summa Canister samples were received on April 02, 2003. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.5 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

Requirement	*TO-15*	*ATL Modifications*
BFB acceptance criteria	CLP protocol	SW-846 protocol
Concentration of IS spike	10 ppbv	25 ppbv when 0.5/2.0 ppbv is used for the reporting limt
Dilutions for initial calibration	Dynamic dilutions or static using canisters	Syringe dilutions
IS recoveries	Within 40% of mean over ICAL for blanks, and w/in 40% of daily CCV for samples.	Within 40% of CCV recoveries for blank and samples.
Daily CCV	30% Difference	30% Difference with two allowed out up to 40%.
Primary ions for Quantification	Freon 114: 85, Carbon Tetrachloride: 117, Trichloroethene: 130, Ethyl Benzene, m,p- and o-Xylene: 91	Freon 114: 135, Carbon Tetrachloride: 119, Trichloroethene: 95, Ethyl Benzene, m,p- and o-Xylene: 106

Receiving Notes

The chain of custody information for sample SVP-2-SG-040103 did not match the entry on the sample tag. The discrepancy was noted in the Login email and the information on the chain of custody was used to process and report the sample.

Analytical Notes

Specific analytes that are requested by the client to be reported as tentatively identified compounds (TICs) are determined by searching for each compound's characteristic spectra. If no chromatographic peak displaying the compound specific spectra exists, then the TIC is reported as not detected. Please note that the laboratory has not evaluated the stability of any heretofore tentatively identified compound in the vapor phase or for efficiency of recovery through the analytical system.

The following compound, alpha-Chlorotoluene, indicated low bias (less than 70% expected recovery) in the daily CCV analyzed on MSD-B on 04/02/03. Associated non-detects in samples SVP-14-SG-040103, SVP-140-SG-040103, Background Air Sample-040103-AM, Background Air Sample-040103-PM and Trip Blank 040103 were flagged to indicate estimated results with low bias.

The reported CCV for each daily batch may be derived from more than one individual analytical file due to the client's request for non-standard compounds.

By specific client request, Tetrafluoroethane was reported as a tentatively identified compound (TIC) to assist in evaluation of the client sampling system.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated Peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: SVP-5-SG-040103

ID#: 0304034-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d040217	Date of Collection: 4/1/03
Dil. Factor:	1.87	Date of Analysis: 4/2/03

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.94	2.4	Not Detected	Not Detected
Methylene Chloride	0.94	3.3	Not Detected	Not Detected
1,1-Dichloroethane	0.94	3.8	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.94	3.8	Not Detected	Not Detected
Chloroform	0.94	4.6	Not Detected	Not Detected
1,1,1-Trichloroethane	0.94	5.2	Not Detected	Not Detected
Benzene	0.94	3.0	Not Detected	Not Detected
1,2-Dichloroethane	0.94	3.8	Not Detected	Not Detected
Trichloroethene	0.94	5.1	Not Detected	Not Detected
Tetrachloroethene	0.94	6.4	Not Detected	Not Detected
Chlorobenzene	0.94	4.4	Not Detected	Not Detected
alpha-Chlorotoluene	0.94	4.9	Not Detected	Not Detected
Acetone	3.7	9.0	Not Detected	Not Detected
Carbon Disulfide	3.7	12	Not Detected	Not Detected
trans-1,2-Dichloroethene	3.7	15	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.7	11	Not Detected	Not Detected
Bromodichloromethane	3.7	25	Not Detected	Not Detected
4-Methyl-2-pentanone	3.7	16	Not Detected	Not Detected
Bromoform	3.7	39	Not Detected	Not Detected
tert-Butylbenzene	3.7	21	Not Detected	Not Detected
Naphthalene	19	100	Not Detected	Not Detected
1,2-Dichlorobenzene	0.94	5.7	Not Detected	Not Detected
1,4-Dichlorobenzene	0.94	5.7	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	BLNK01	NA	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	94	70-130

AIR TOXICS LTD.

SAMPLE NAME: SVP-14-SG-040103

ID#: 0304034-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	b040224	Date of Collection: 4/1/03
Dil. Factor:	784	Date of Analysis: 4/3/03

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	390	1000	Not Detected	Not Detected
Methylene Chloride	390	1400	Not Detected	Not Detected
1,1-Dichloroethane	390	1600	Not Detected	Not Detected
cis-1,2-Dichloroethene	390	1600	Not Detected	Not Detected
Chloroform	390	1900	Not Detected	Not Detected
1,1,1-Trichloroethane	390	2200	Not Detected	Not Detected
Benzene	390	1300	1100	3700
1,2-Dichloroethane	390	1600	Not Detected	Not Detected
Trichloroethene	390	2100	Not Detected	Not Detected
Tetrachloroethene	390	2700	Not Detected	Not Detected
Chlorobenzene	390	1800	2200	10000
alpha-Chlorotoluene	390	2100	Not Detected U J	Not Detected U J
Acetone	1600	3800	Not Detected	Not Detected
Carbon Disulfide	1600	5000	Not Detected	Not Detected
trans-1,2-Dichloroethene	1600	6300	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1600	4700	Not Detected	Not Detected
Bromodichloromethane	1600	11000	Not Detected	Not Detected
4-Methyl-2-pentanone	1600	6500	72000	300000
Bromoform	1600	16000	Not Detected	Not Detected
tert-Butylbenzene	1600	8700	Not Detected	Not Detected
Naphthalene	7800	42000	Not Detected	Not Detected
1,2-Dichlorobenzene	390	2400	Not Detected	Not Detected
1,4-Dichlorobenzene	390	2400	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	BLNK01	NA	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	85	70-130

AIR TOXICS LTD.

SAMPLE NAME: SVP-17-SG-040103

ID#: 0304034-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d040322	Date of Collection:	4/1/03
Dil. Factor:	1.79	Date of Analysis:	4/3/03

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.90	2.3	Not Detected	Not Detected
Methylene Chloride	0.90	3.2	Not Detected	Not Detected
1,1-Dichloroethane	0.90	3.7	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.90	3.6	Not Detected	Not Detected
Chloroform	0.90	4.4	Not Detected	Not Detected
1,1,1-Trichloroethane	0.90	5.0	Not Detected	Not Detected
Benzene	0.90	2.9	3.5	11
1,2-Dichloroethane	0.90	3.7	Not Detected	Not Detected
Trichloroethene	0.90	4.9	Not Detected	Not Detected
Tetrachloroethene	0.90	6.2	Not Detected	Not Detected
Chlorobenzene	0.90	4.2	Not Detected	Not Detected
alpha-Chlorotoluene	0.90	4.7	Not Detected	Not Detected
Acetone	3.6	8.6	11	26
Carbon Disulfide	3.6	11	Not Detected	Not Detected
trans-1,2-Dichloroethene	3.6	14	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.6	11	Not Detected	Not Detected
Bromodichloromethane	3.6	24	Not Detected	Not Detected
4-Methyl-2-pentanone	3.6	15	Not Detected	Not Detected
Bromoform	3.6	38	Not Detected	Not Detected
tert-Butylbenzene	3.6	20	Not Detected	Not Detected
Naphthalene	18	95	Not Detected	Not Detected
1,2-Dichlorobenzene	0.90	5.5	Not Detected	Not Detected
1,4-Dichlorobenzene	0.90	5.5	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	BLNK01	NA	150

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	94	70-130

AIR TOXICS LTD.

SAMPLE NAME: SVP-140-SG-040103

ID#: 0304034-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	b040225	Date of Collection:	4/1/03
Dil. Factor:	764	Date of Analysis:	4/3/03

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	380	990	Not Detected	Not Detected
Methylene Chloride	380	1300	Not Detected	Not Detected
1,1-Dichloroethane	380	1600	Not Detected	Not Detected
cis-1,2-Dichloroethene	380	1500	Not Detected	Not Detected
Chloroform	380	1900	Not Detected	Not Detected
1,1,1-Trichloroethane	380	2100	Not Detected	Not Detected
Benzene	380	1200	1100	3700
1,2-Dichloroethane	380	1600	Not Detected	Not Detected
Trichloroethene	380	2100	Not Detected	Not Detected
Tetrachloroethene	380	2600	Not Detected	Not Detected
Chlorobenzene	380	1800	2300	11000
alpha-Chlorotoluene	380	2000	Not Detected U J	Not Detected U J
Acetone	1500	3700	Not Detected	Not Detected
Carbon Disulfide	1500	4800	Not Detected	Not Detected
trans-1,2-Dichloroethene	1500	6200	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1500	4600	Not Detected	Not Detected
Bromodichloromethane	1500	10000	Not Detected	Not Detected
4-Methyl-2-pentanone	1500	6400	75000	310000
Bromoform	1500	16000	Not Detected	Not Detected
tert-Butylbenzene	1500	8500	Not Detected	Not Detected
Naphthalene	7600	41000	Not Detected	Not Detected
1,2-Dichlorobenzene	380	2300	Not Detected	Not Detected
1,4-Dichlorobenzene	380	2300	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	BLNK01	NA	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	86	70-130

AIR TOXICS LTD.

SAMPLE NAME: SVP-1-SG-040103

ID#: 0304034-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d040323	Date of Collection:	4/1/03
Dil. Factor:	1.96	Date of Analysis:	4/3/03

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.98	2.5	Not Detected	Not Detected
Methylene Chloride	0.98	3.5	Not Detected	Not Detected
1,1-Dichloroethane	0.98	4.0	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.98	3.9	Not Detected	Not Detected
Chloroform	0.98	4.9	Not Detected	Not Detected
1,1,1-Trichloroethane	0.98	5.4	Not Detected	Not Detected
Benzene	0.98	3.2	Not Detected	Not Detected
1,2-Dichloroethane	0.98	4.0	Not Detected	Not Detected
Trichloroethene	0.98	5.4	Not Detected	Not Detected
Tetrachloroethene	0.98	6.8	Not Detected	Not Detected
Chlorobenzene	0.98	4.6	Not Detected	Not Detected
alpha-Chlorotoluene	0.98	5.2	Not Detected	Not Detected
Acetone	3.9	9.5	7.6	18
Carbon Disulfide	3.9	12	Not Detected	Not Detected
trans-1,2-Dichloroethene	3.9	16	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.9	12	Not Detected	Not Detected
Bromodichloromethane	3.9	27	Not Detected	Not Detected
4-Methyl-2-pentanone	3.9	16	Not Detected	Not Detected
Bromoform	3.9	41	Not Detected	Not Detected
tert-Butylbenzene	3.9	22	Not Detected	Not Detected
Naphthalene	20	100	Not Detected	Not Detected
1,2-Dichlorobenzene	0.98	6.0	Not Detected	Not Detected
1,4-Dichlorobenzene	0.98	6.0	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	BLNK01	NA	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	94	70-130

AIR TOXICS LTD.

SAMPLE NAME: SVP-2-SG-040103

ID#: 0304034-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d040220	Date of Collection: 4/1/03
Dil. Factor:	1.96	Date of Analysis: 4/2/03

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.98	2.5	Not Detected	Not Detected
Methylene Chloride	0.98	3.5	Not Detected	Not Detected
1,1-Dichloroethane	0.98	4.0	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.98	3.9	Not Detected	Not Detected
Chloroform	0.98	4.9	Not Detected	Not Detected
1,1,1-Trichloroethane	0.98	5.4	Not Detected	Not Detected
Benzene	0.98	3.2	1.0	3.3
1,2-Dichloroethane	0.98	4.0	Not Detected	Not Detected
Trichloroethene	0.98	5.4	Not Detected	Not Detected
Tetrachloroethene	0.98	6.8	Not Detected	Not Detected
Chlorobenzene	0.98	4.6	Not Detected	Not Detected
alpha-Chlorotoluene	0.98	5.2	Not Detected	Not Detected
Acetone	3.9	9.5	Not Detected	Not Detected
Carbon Disulfide	3.9	12	Not Detected	Not Detected
trans-1,2-Dichloroethene	3.9	16	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.9	12	Not Detected	Not Detected
Bromodichloromethane	3.9	27	Not Detected	Not Detected
4-Methyl-2-pentanone	3.9	16	Not Detected	Not Detected
Bromoform	3.9	41	Not Detected	Not Detected
tert-Butylbenzene	3.9	22	Not Detected	Not Detected
Naphthalene	20	100	Not Detected	Not Detected
1,2-Dichlorobenzene	0.98	6.0	Not Detected	Not Detected
1,4-Dichlorobenzene	0.98	6.0	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	BLNK01	NA	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	92	70-130

AIR TOXICS LTD.

SAMPLE NAME: SVP-3-SG-040103

ID#: 0304034-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d040221	Date of Collection:	4/1/03
Dil. Factor:	1.91	Date of Analysis:	4/2/03

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.96	2.5	Not Detected	Not Detected
Methylene Chloride	0.96	3.4	Not Detected	Not Detected
1,1-Dichloroethane	0.96	3.9	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.96	3.8	Not Detected	Not Detected
Chloroform	0.96	4.7	Not Detected	Not Detected
1,1,1-Trichloroethane	0.96	5.3	Not Detected	Not Detected
Benzene	0.96	3.1	Not Detected	Not Detected
1,2-Dichloroethane	0.96	3.9	Not Detected	Not Detected
Trichloroethene	0.96	5.2	Not Detected	Not Detected
Tetrachloroethene	0.96	6.6	1.9	13
Chlorobenzene	0.96	4.5	Not Detected	Not Detected
alpha-Chlorotoluene	0.96	5.0	Not Detected	Not Detected
Acetone	3.8	9.2	Not Detected	Not Detected
Carbon Disulfide	3.8	12	Not Detected	Not Detected
trans-1,2-Dichloroethene	3.8	15	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.8	11	Not Detected	Not Detected
Bromodichloromethane	3.8	26	Not Detected	Not Detected
4-Methyl-2-pentanone	3.8	16	Not Detected	Not Detected
Bromoform	3.8	40	Not Detected	Not Detected
tert-Butylbenzene	3.8	21	Not Detected	Not Detected
Naphthalene	19	100	Not Detected	Not Detected
1,2-Dichlorobenzene	0.96	5.8	Not Detected	Not Detected
1,4-Dichlorobenzene	0.96	5.8	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	BLNK01	NA	2100

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	93	70-130

AIR TOXICS LTD.

SAMPLE NAME: SVP-4-SG-040103

ID#: 0304034-08A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d040222	Date of Collection: 4/1/03
Dil. Factor:	1.91	Date of Analysis: 4/2/03

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.96	2.5	Not Detected	Not Detected
Methylene Chloride	0.96	3.4	Not Detected	Not Detected
1,1-Dichloroethane	0.96	3.9	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.96	3.8	Not Detected	Not Detected
Chloroform	0.96	4.7	Not Detected	Not Detected
1,1,1-Trichloroethane	0.96	5.3	Not Detected	Not Detected
Benzene	0.96	3.1	Not Detected	Not Detected
1,2-Dichloroethane	0.96	3.9	Not Detected	Not Detected
Trichloroethene	0.96	5.2	Not Detected	Not Detected
Tetrachloroethene	0.96	6.6	Not Detected	Not Detected
Chlorobenzene	0.96	4.5	Not Detected	Not Detected
alpha-Chlorotoluene	0.96	5.0	Not Detected	Not Detected
Acetone	3.8	9.2	Not Detected	Not Detected
Carbon Disulfide	3.8	12	Not Detected	Not Detected
trans-1,2-Dichloroethene	3.8	15	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.8	11	Not Detected	Not Detected
Bromodichloromethane	3.8	26	Not Detected	Not Detected
4-Methyl-2-pentanone	3.8	16	Not Detected	Not Detected
Bromoform	3.8	40	Not Detected	Not Detected
tert-Butylbenzene	3.8	21	Not Detected	Not Detected
Naphthalene	19	100	Not Detected	Not Detected
1,2-Dichlorobenzene	0.96	5.8	Not Detected	Not Detected
1,4-Dichlorobenzene	0.96	5.8	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	BLNK01	NA	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	91	70-130

AIR TOXICS LTD.

SAMPLE NAME: SVP-4-SG-040103 Duplicate

ID#: 0304034-08AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d040223	Date of Collection: 4/1/03
Dil. Factor:	1.91	Date of Analysis: 4/3/03

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.96	2.5	Not Detected	Not Detected
Methylene Chloride	0.96	3.4	Not Detected	Not Detected
1,1-Dichloroethane	0.96	3.9	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.96	3.8	Not Detected	Not Detected
Chloroform	0.96	4.7	Not Detected	Not Detected
1,1,1-Trichloroethane	0.96	5.3	Not Detected	Not Detected
Benzene	0.96	3.1	Not Detected	Not Detected
1,2-Dichloroethane	0.96	3.9	Not Detected	Not Detected
Trichloroethene	0.96	5.2	Not Detected	Not Detected
Tetrachloroethene	0.96	6.6	Not Detected	Not Detected
Chlorobenzene	0.96	4.5	Not Detected	Not Detected
alpha-Chlorotoluene	0.96	5.0	Not Detected	Not Detected
Acetone	3.8	9.2	Not Detected	Not Detected
Carbon Disulfide	3.8	12	Not Detected	Not Detected
trans-1,2-Dichloroethene	3.8	15	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.8	11	Not Detected	Not Detected
Bromodichloromethane	3.8	26	Not Detected	Not Detected
4-Methyl-2-pentanone	3.8	16	Not Detected	Not Detected
Bromoform	3.8	40	Not Detected	Not Detected
tert-Butylbenzene	3.8	21	Not Detected	Not Detected
Naphthalene	19	100	Not Detected	Not Detected
1,2-Dichlorobenzene	0.96	5.8	Not Detected	Not Detected
1,4-Dichlorobenzene	0.96	5.8	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	BLNK01	NA	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	91	70-130

AIR TOXICS LTD.

SAMPLE NAME: Background Air Sample-040103-AM

ID#: 0304034-09A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	b040218	Date of Collection: 4/1/03
Dil. Factor:	1.91	Date of Analysis: 4/2/03

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.96	2.5	Not Detected	Not Detected
Methylene Chloride	0.96	3.4	Not Detected	Not Detected
1,1-Dichloroethane	0.96	3.9	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.96	3.8	Not Detected	Not Detected
Chloroform	0.96	4.7	Not Detected	Not Detected
1,1,1-Trichloroethane	0.96	5.3	Not Detected	Not Detected
Benzene	0.96	3.1	Not Detected	Not Detected
1,2-Dichloroethane	0.96	3.9	Not Detected	Not Detected
Trichloroethene	0.96	5.2	Not Detected	Not Detected
Tetrachloroethene	0.96	6.6	Not Detected	Not Detected
Chlorobenzene	0.96	4.5	2.6	12
alpha-Chlorotoluene	0.96	5.0	Not Detected U J	Not Detected U J
Acetone	3.8	9.2	4.7	11
Carbon Disulfide	3.8	12	Not Detected	Not Detected
trans-1,2-Dichloroethene	3.8	15	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.8	11	Not Detected	Not Detected
Bromodichloromethane	3.8	26	Not Detected	Not Detected
4-Methyl-2-pentanone	3.8	16	Not Detected	Not Detected
Bromoform	3.8	40	Not Detected	Not Detected
tert-Butylbenzene	3.8	21	Not Detected	Not Detected
Naphthalene	19	100	Not Detected	Not Detected
1,2-Dichlorobenzene	0.96	5.8	Not Detected	Not Detected
1,4-Dichlorobenzene	0.96	5.8	1.5	8.9

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	BLNK01	NA	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	84	70-130

AIR TOXICS LTD.

SAMPLE NAME: Background Air Sample-040103-PM

ID#: 0304034-10A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	b040219	Date of Collection: 4/1/03
Dil. Factor:	1.75	Date of Analysis: 4/3/03

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.88	2.3	Not Detected	Not Detected
Methylene Chloride	0.88	3.1	Not Detected	Not Detected
1,1-Dichloroethane	0.88	3.6	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.88	3.5	Not Detected	Not Detected
Chloroform	0.88	4.3	Not Detected	Not Detected
1,1,1-Trichloroethane	0.88	4.8	Not Detected	Not Detected
Benzene	0.88	2.8	Not Detected	Not Detected
1,2-Dichloroethane	0.88	3.6	Not Detected	Not Detected
Trichloroethene	0.88	4.8	Not Detected	Not Detected
Tetrachloroethene	0.88	6.0	Not Detected	Not Detected
Chlorobenzene	0.88	4.1	Not Detected	Not Detected
alpha-Chlorotoluene	0.88	4.6	Not Detected U J	Not Detected U J
Acetone	3.5	8.4	4.1	10
Carbon Disulfide	3.5	11	Not Detected	Not Detected
trans-1,2-Dichloroethene	3.5	14	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.5	10	Not Detected	Not Detected
Bromodichloromethane	3.5	24	Not Detected	Not Detected
4-Methyl-2-pentanone	3.5	14	Not Detected	Not Detected
Bromoform	3.5	37	Not Detected	Not Detected
tert-Butylbenzene	3.5	20	Not Detected	Not Detected
Naphthalene	18	93	Not Detected	Not Detected
1,2-Dichlorobenzene	0.88	5.3	Not Detected	Not Detected
1,4-Dichlorobenzene	0.88	5.3	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	BLNK01	NA	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	84	70-130

AIR TOXICS LTD.

SAMPLE NAME: Trip Blank 040103

ID#: 0304034-11A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	b040220	Date of Collection:	4/1/03
Dil. Factor:	1.00	Date of Analysis:	4/3/03

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.50	1.3	Not Detected	Not Detected
Methylene Chloride	0.50	1.8	Not Detected	Not Detected
1,1-Dichloroethane	0.50	2.0	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.50	2.0	Not Detected	Not Detected
Chloroform	0.50	2.5	Not Detected	Not Detected
1,1,1-Trichloroethane	0.50	2.8	Not Detected	Not Detected
Benzene	0.50	1.6	Not Detected	Not Detected
1,2-Dichloroethane	0.50	2.0	Not Detected	Not Detected
Trichloroethene	0.50	2.7	Not Detected	Not Detected
Tetrachloroethene	0.50	3.4	Not Detected	Not Detected
Chlorobenzene	0.50	2.3	Not Detected	Not Detected
alpha-Chlorotoluene	0.50	2.6	Not Detected U J	Not Detected U J
Acetone	2.0	4.8	Not Detected	Not Detected
Carbon Disulfide	2.0	6.3	Not Detected	Not Detected
trans-1,2-Dichloroethene	2.0	8.0	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	6.0	Not Detected	Not Detected
Bromodichloromethane	2.0	14	Not Detected	Not Detected
4-Methyl-2-pentanone	2.0	8.3	Not Detected	Not Detected
Bromoform	2.0	21	Not Detected	Not Detected
tert-Butylbenzene	2.0	11	Not Detected	Not Detected
Naphthalene	10	53	Not Detected	Not Detected
1,2-Dichlorobenzene	0.50	3.0	Not Detected	Not Detected
1,4-Dichlorobenzene	0.50	3.0	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	BLNK01	NA	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	83	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0304034-12A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d040207	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	4/2/03

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.50	1.3	Not Detected	Not Detected
Methylene Chloride	0.50	1.8	Not Detected	Not Detected
1,1-Dichloroethane	0.50	2.0	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.50	2.0	Not Detected	Not Detected
Chloroform	0.50	2.5	Not Detected	Not Detected
1,1,1-Trichloroethane	0.50	2.8	Not Detected	Not Detected
Benzene	0.50	1.6	Not Detected	Not Detected
1,2-Dichloroethane	0.50	2.0	Not Detected	Not Detected
Trichloroethene	0.50	2.7	Not Detected	Not Detected
Tetrachloroethene	0.50	3.4	Not Detected	Not Detected
Chlorobenzene	0.50	2.3	Not Detected	Not Detected
alpha-Chlorotoluene	0.50	2.6	Not Detected	Not Detected
Acetone	2.0	4.8	Not Detected	Not Detected
Carbon Disulfide	2.0	6.3	Not Detected	Not Detected
trans-1,2-Dichloroethene	2.0	8.0	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	6.0	Not Detected	Not Detected
Bromodichloromethane	2.0	14	Not Detected	Not Detected
4-Methyl-2-pentanone	2.0	8.3	Not Detected	Not Detected
Bromoform	2.0	21	Not Detected	Not Detected
tert-Butylbenzene	2.0	11	Not Detected	Not Detected
Naphthalene	10	53	Not Detected	Not Detected
1,2-Dichlorobenzene	0.50	3.0	Not Detected	Not Detected
1,4-Dichlorobenzene	0.50	3.0	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	BLNK01	NA	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	92	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0304034-12B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**b040210**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/2/03**	

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.50	1.3	Not Detected	Not Detected
Methylene Chloride	0.50	1.8	Not Detected	Not Detected
1,1-Dichloroethane	0.50	2.0	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.50	2.0	Not Detected	Not Detected
Chloroform	0.50	2.5	Not Detected	Not Detected
1,1,1-Trichloroethane	0.50	2.8	Not Detected	Not Detected
Benzene	0.50	1.6	Not Detected	Not Detected
1,2-Dichloroethane	0.50	2.0	Not Detected	Not Detected
Trichloroethene	0.50	2.7	Not Detected	Not Detected
Tetrachloroethene	0.50	3.4	Not Detected	Not Detected
Chlorobenzene	0.50	2.3	Not Detected	Not Detected
alpha-Chlorotoluene	0.50	2.6	Not Detected U J	Not Detected U J
Acetone	2.0	4.8	Not Detected	Not Detected
Carbon Disulfide	2.0	6.3	Not Detected	Not Detected
trans-1,2-Dichloroethene	2.0	8.0	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	6.0	Not Detected	Not Detected
Bromodichloromethane	2.0	14	Not Detected	Not Detected
4-Methyl-2-pentanone	2.0	8.3	Not Detected	Not Detected
Bromoform	2.0	21	Not Detected	Not Detected
tert-Butylbenzene	2.0	11	Not Detected	Not Detected
Naphthalene	10	53	Not Detected	Not Detected
1,2-Dichlorobenzene	0.50	3.0	Not Detected	Not Detected
1,4-Dichlorobenzene	0.50	3.0	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	BLNK01	NA	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	84	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0304034-12C

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d040307	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 4/3/03

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.50	1.3	Not Detected	Not Detected
Methylene Chloride	0.50	1.8	Not Detected	Not Detected
1,1-Dichloroethane	0.50	2.0	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.50	2.0	Not Detected	Not Detected
Chloroform	0.50	2.5	Not Detected	Not Detected
1,1,1-Trichloroethane	0.50	2.8	Not Detected	Not Detected
Benzene	0.50	1.6	Not Detected	Not Detected
1,2-Dichloroethane	0.50	2.0	Not Detected	Not Detected
Trichloroethene	0.50	2.7	Not Detected	Not Detected
Tetrachloroethene	0.50	3.4	Not Detected	Not Detected
Chlorobenzene	0.50	2.3	Not Detected	Not Detected
alpha-Chlorotoluene	0.50	2.6	Not Detected	Not Detected
Acetone	2.0	4.8	Not Detected	Not Detected
Carbon Disulfide	2.0	6.3	Not Detected	Not Detected
trans-1,2-Dichloroethene	2.0	8.0	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	6.0	Not Detected	Not Detected
Bromodichloromethane	2.0	14	Not Detected	Not Detected
4-Methyl-2-pentanone	2.0	8.3	Not Detected	Not Detected
Bromoform	2.0	21	Not Detected	Not Detected
tert-Butylbenzene	2.0	11	Not Detected	Not Detected
Naphthalene	10	53	Not Detected	Not Detected
1,2-Dichlorobenzene	0.50	3.0	Not Detected	Not Detected
1,4-Dichlorobenzene	0.50	3.0	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	BLNK01	NA	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	95	70-130

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0304034-13A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	b040204	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 4/2/03	

Compound	%Recovery
Vinyl Chloride	110
Methylene Chloride	111
1,1-Dichloroethane	117
cis-1,2-Dichloroethene	119
Chloroform	114
1,1,1-Trichloroethane	114
Benzene	109
1,2-Dichloroethane	123
Trichloroethene	115
Tetrachloroethene	121
Chlorobenzene	108
alpha-Chlorotoluene	62 Q
Acetone	95
Carbon Disulfide	82
trans-1,2-Dichloroethene	84
2-Butanone (Methyl Ethyl Ketone)	103
Bromodichloromethane	91
4-Methyl-2-pentanone	106
Bromoform	86
tert-Butylbenzene	81
Naphthalene	82
1,2-Dichlorobenzene	73
1,4-Dichlorobenzene	76

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	85	70-130

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0304034-13B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d040202	**Date of Collection:**	NA
Dil. Factor:	1.00	**Date of Analysis:**	4/2/03

Compound	%Recovery
Vinyl Chloride	82
Methylene Chloride	80
1,1-Dichloroethane	83
cis-1,2-Dichloroethene	83
Chloroform	84
1,1,1-Trichloroethane	86
Benzene	82
1,2-Dichloroethane	80
Trichloroethene	82
Tetrachloroethene	80
Chlorobenzene	82
alpha-Chlorotoluene	94
Acetone	92
Carbon Disulfide	88
trans-1,2-Dichloroethene	86
2-Butanone (Methyl Ethyl Ketone)	90
Bromodichloromethane	93
4-Methyl-2-pentanone	92
Bromoform	97
tert-Butylbenzene	117
Naphthalene	95
1,2-Dichlorobenzene	86
1,4-Dichlorobenzene	90

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	104	70-130

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0304034-13C

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d040302	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 4/3/03	

Compound	%Recovery
Vinyl Chloride	87
Methylene Chloride	84
1,1-Dichloroethane	88
cis-1,2-Dichloroethene	88
Chloroform	88
1,1,1-Trichloroethane	91
Benzene	88
1,2-Dichloroethane	88
Trichloroethene	88
Tetrachloroethene	92
Chlorobenzene	90
alpha-Chlorotoluene	85
Acetone	94
Carbon Disulfide	89
trans-1,2-Dichloroethene	89
2-Butanone (Methyl Ethyl Ketone)	92
Bromodichloromethane	96
4-Methyl-2-pentanone	96
Bromoform	99
tert-Butylbenzene	108
Naphthalene	91
1,2-Dichlorobenzene	85
1,4-Dichlorobenzene	87

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	97	70-130

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0304034-14A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	b040206	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 4/2/03	

Compound	%Recovery
Vinyl Chloride	120
Methylene Chloride	110
1,1-Dichloroethane	105
cis-1,2-Dichloroethene	119
Chloroform	111
1,1,1-Trichloroethane	110
Benzene	118
1,2-Dichloroethane	127
Trichloroethene	123
Tetrachloroethene	131 Q
Chlorobenzene	110
alpha-Chlorotoluene	76
Acetone	83
Carbon Disulfide	78
trans-1,2-Dichloroethene	84
2-Butanone (Methyl Ethyl Ketone)	91
Bromodichloromethane	80
4-Methyl-2-pentanone	92
Bromoform	64
tert-Butylbenzene	Not Spiked
Naphthalene	Not Spiked
1,2-Dichlorobenzene	71
1,4-Dichlorobenzene	70

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	85	70-130

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0304034-14B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d040203	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 4/2/03	

Compound	%Recovery
Vinyl Chloride	94
Methylene Chloride	82
1,1-Dichloroethane	77
cis-1,2-Dichloroethene	88
Chloroform	84
1,1,1-Trichloroethane	87
Benzene	92
1,2-Dichloroethane	86
Trichloroethene	90
Tetrachloroethene	92
Chlorobenzene	88
alpha-Chlorotoluene	99
Acetone	90
Carbon Disulfide	89
trans-1,2-Dichloroethene	94
2-Butanone (Methyl Ethyl Ketone)	89
Bromodichloromethane	86
4-Methyl-2-pentanone	89
Bromoform	84
tert-Butylbenzene	Not Spiked
Naphthalene	Not Spiked
1,2-Dichlorobenzene	84
1,4-Dichlorobenzene	84

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	99	70-130

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0304034-14C

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d040303	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 4/3/03	

Compound	%Recovery
Vinyl Chloride	90
Methylene Chloride	80
1,1-Dichloroethane	75
cis-1,2-Dichloroethene	85
Chloroform	82
1,1,1-Trichloroethane	83
Benzene	90
1,2-Dichloroethane	86
Trichloroethene	89
Tetrachloroethene	90
Chlorobenzene	86
alpha-Chlorotoluene	95
Acetone	88
Carbon Disulfide	86
trans-1,2-Dichloroethene	91
2-Butanone (Methyl Ethyl Ketone)	86
Bromodichloromethane	84
4-Methyl-2-pentanone	87
Bromoform	82
tert-Butylbenzene	Not Spiked
Naphthalene	Not Spiked
1,2-Dichlorobenzene	83
1,4-Dichlorobenzene	81

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	98	70-130

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CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice
Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX: (916) 985-1020

Contact Person: Mike Susca
Company: TRC Environmental
Address: 5 Waterside Crossing City: Windsor State: CT Zip: 06095
Phone: (860) 298-6234 FAX: (860) 298-6399
Collected By: Signature: Kate Launal

Project Info:
P.O. # ~~38184~~
Project # 38182
Project Name: Stauffer/Sunset

Turn Around Time:
☐ Normal
☒ Rush See NOTES Specify

ML 4/2/03

Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested	Canister Pressure / Vacuum Initial	Final	Receipt
01A	SVP-5'-SG-040103	4/1/03 ~ 0922	TO-15 - Refer to analyte list previously submitted	28.5	8.5	9.5"Hg
02A	SVP-14-SG-040103	4/1/03 ~ ~~1349~~ 0916 (QA)	TO-15 - " "	29	8.5	9.5"Hg
03A	SVP-17-SG-040103	4/1/03 ~ 0950	TO-15 - " "	31	9	7.5"Hg
04A	SVP-140-SG-040103	4/1/03 ~ ~~1349~~ 0916 (QA)	TO-15 - " "	26	4	9.0"Hg

Relinquished By: (Signature) Date/Time: Kate Launal 4/1/03 1430
Received By: (Signature) Date/Time:
Relinquished By: (Signature) Date/Time:
Received By: (Signature) Date/Time:
Relinquished By: (Signature) Date/Time:
Received By: (Signature) Date/Time: Tony Bodal 4/2/03 910 ATL

Notes:
48 TAT on analyses
Standard TAT on report (include data validation package)

Lab Use Only	Shipper Name	Air Bill #(s)	Opened By:	Temp. (°C)	Condition	Custody Seals Intact?	Work Order #
	FedEx	802462232336	TB	—	Good	(Yes) No None	0304034

Form 1285.xx

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AN ENVIRONMENTAL ANALYTICAL LABORATORY

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180 BLUE RAVINE ROAD, SUITE B
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(916) 985-1000 FAX: (916) 985-1020

Contact Person Mike Sosica
Company TRC Environmental
Address 5 Waterside Crossing City Windsor State CT Zip 06095
Phone (860)298-6234 FAX (860)298-6399
Collected By: Signature Kate Launak

Project info:
P.O. #
Project # 38182
Project Name Solutia/Sauget

Turn Around Time:
☐ Normal
☒ Rush SEE NOTES
Specify

ML 4/2/03

Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested	Canister Pressure / Vacuum Initial	Final	Receipt
05A	SVP-1-SG-040103	4/1/03 ~ 1331	TO-15 - Refer to analyte list previously submitted	28.5	8	9.5 "Hg
06A	SVP-2-SG-040103	4/1/03 ~ 1132	TO-15 " "	29	9	9.5 "Hg
07A	SVP-3-SG-040103	4/1/03 ~ 1145	TO-15 " "	28	7	9.0 "Hg
08A	SVP-4-SG-040103	4/1/03 ~ 1138	TO-15 " "	28.5	8.0	9.0 "Hg

Relinquished By: (Signature) Date/Time: Kate Launak 4/1/03 1435
Received By: (Signature) Date/Time:
Relinquished By: (Signature) Date/Time:
Received By: (Signature) Date/Time:
Relinquished By: (Signature) Date/Time:
Received By: (Signature) Date/Time: Tank Bock / ATL 4/2/03 910

Notes:
48 hr TAT on analysis
Standard TAT on reports, include complete data validation package

Lab Use Only	Shipper Name	Air Bill #	Opened By:	Temp. (°C)	Condition	Custody Seals Intact?	Work Order #
	FedEx	802462732336	TB	—	Good	(Yes) No None	0304034

Form 1293 rev. 02

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CHAIN-OF-CUSTODY RECORD

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180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX: (916) 985-1020

Contact Person Mike Susca
Company TRC Environmental
Address 5 Waterside Crossing City Windsor State CT Zip 06095
Phone (860) 298-6234 FAX (860) 298-6399
Collected By: Signature Kate Laurie

Project Info:
P.O. #
Project # 38182
Project Name Solutia/ Sauget

Turn Around Time:
☒ Normal
☒ Rush SEE NOTES
Specify
ML 4/2/03

Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested	Canister Pressure / Vacuum Initial	Final	Receipt
09A	Background Air Sample-040103-AM	4/1/03 0908	TO-15 - Refer to previously submitted analyte list	28.5	8.0	9.0"Hg
10A	Background Air Sample-040103-PM	4/1/03 1327	TO-15 " "	29	8.5	7.0"Hg
11A	Trip Blank 040103	4/1/03 1410	TO-15 " "	NA	NA	29.0"Hg

Relinquished By: (Signature) Date/Time: Kate Laurie 040103/1440
Received By: (Signature) Date/Time:
Relinquished By: (Signature) Date/Time:
Received By: (Signature) Date/Time:
Relinquished By: (Signature) Date/Time:
Received By: (Signature) Date/Time: Tawn Bostol ATL 4/2/03 910

Notes:
48 hr. TAT on analyses
Standard TAT on report (include data validation package)

Lab Use Only: Shipper Name	Air Bill #	Opened By:	Temp. (°C)	Condition	Custody Seals Intact?	Work Order #
FedEx	180246223233361	TB	—	Good	(Yes) No None	0304034

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Air Toxics Ltd. Introduces the Electronic Report

Thank you for choosing Air Toxics Ltd. To better serve our customers, we are providing your report by e-mail. This document is provided in Portable Document Format which can be viewed with Acrobat Reader by Adobe.

This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

(916) 985-1000 .FAX (916) 985-1020
Hours 8:00 A.M to 6:00 P.M. Pacific
E-mail to:samplereceiving@airtoxics.com

@ AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0304003B

Work Order Summary

CLIENT:	Mr. Gary Ritter TRC Environmental Corporation 5 Waterside Crossing Windsor, CT 06095	**BILL TO:**	Mr. Gary Ritter TRC Environmental Corporation 5 Waterside Crossing Windsor, CT 06095
PHONE:	860-298-6300	**P.O. #**	
FAX:		**PROJECT #**	38182 Solutia
DATE RECEIVED:	4/1/03	**CONTACT:**	Betty Chu
DATE COMPLETED:	4/11/03		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.
11A	SVP-16-SG-033103	Modified TO-15/TIC	9.0 "Hg
12A	SVP-12-SG-033103	Modified TO-15/TIC	8.5 "Hg
12AA	SVP-12-SG-033103 Duplicate	Modified TO-15/TIC	8.5 "Hg
13A	SVP-15-SG-033103	Modified TO-15/TIC	8.0 "Hg
14A	SVP-8-SG-033103	Modified TO-15/TIC	8.5 "Hg
14AA	SVP-8-SG-033103 Duplicate	Modified TO-15/TIC	8.5 "Hg
15A	SVP-10-SG-033103	Modified TO-15/TIC	8.0 "Hg
16A	SVP-100-SG-033103	Modified TO-15/TIC	7.5 "Hg
17A	SVP-11-SG-033103	Modified TO-15/TIC	9.0 "Hg
18A	SVP-9-SG-033103	Modified TO-15/TIC	8.5 "Hg
19A	SVP-6-SG-033103	Modified TO-15/TIC	9.0 "Hg
20A	SVP-Background Sample-033103	Modified TO-15/TIC	8.0 "Hg
21A	Trip Blank 033103	Modified TO-15/TIC	29.0 "Hg
22A	Lab Blank	Modified TO-15/TIC	NA
22B	Lab Blank	Modified TO-15/TIC	NA
23A	CCV	Modified TO-15/TIC	NA
23B	CCV	Modified TO-15/TIC	NA
24A	LCS	Modified TO-15/TIC	NA
24B	LCS	Modified TO-15/TIC	NA

CERTIFIED BY: Linda A. Frumarx DATE: 04/14/03

Laboratory Director

Certfication numbers: AR DEQ, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/02, Expiration date: 06/30/03
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified TO-15
TRC Environmental Corporation
Workorder# 0304003B

Eleven 6 Liter Summa Canister samples were received on April 01, 2003. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.5 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

Requirement	*TO-15*	*ATL Modifications*
BFB acceptance criteria	CLP protocol	SW-846 protocol
Concentration of IS spike	10 ppbv	25 ppbv when 0.5/2.0 ppbv is used for the reporting limt
Dilutions for initial calibration	Dynamic dilutions or static using canisters	Syringe dilutions
IS recoveries	Within 40% of mean over ICAL for blanks, and w/in 40% of daily CCV for samples.	Within 40% of CCV recoveries for blank and samples.
Daily CCV	30% Difference	30% Difference with two allowed out up to 40%.
Primary ions for Quantification	Freon 114: 85, Carbon Tetrachloride: 117, Trichloroethene: 130, Ethyl Benzene, m,p- and o-Xylene: 91	Freon 114: 135, Carbon Tetrachloride: 119, Trichloroethene: 95, Ethyl Benzene, m,p- and o-Xylene: 106

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The following compound, alpha-Chlorotoluene, indicated low bias (less than 70% expected recovery) in the daily CCV analyzed on 04-01-2003. Associated non-detects in samples SVP-10-SG-033103, SVP-100-SG-033103, SVP-11-SG-033103, SVP-9-SG-033103, SVP-6-SG-033103 , SVP-Background Sample-033103 , and Trip Blank 033103 were flagged to indicate estimated results with low bias.

The reported CCV for each daily batch may be derived from more than one individual analytical file due to the client's request for non-standard compounds.

Specific analytes that are requested by the client to be reported as tentatively identified compounds (TICs) are determined by searching for each compound's characteristic spectra. If no chromatographic peak displaying the compound specific spectra exists, then the TIC is reported as not detected. Please note that the laboratory has not evaluated the stability of any heretofore tentatively identified compound in the vapor phase or for efficiency of recovery through the analytical system.

By specific client request, Tetrafluoroethane was reported as a tentatively identified compound (TIC) to

assist in evaluation of the client sampling system.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated Peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: SVP-16-SG-033103

ID#: 0304003B-11A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d040118	Date of Collection: 3/31/03
Dil. Factor:	1.91	Date of Analysis: 4/1/03

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.96	2.5	Not Detected	Not Detected
Methylene Chloride	0.96	3.4	Not Detected	Not Detected
1,1-Dichloroethane	0.96	3.9	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.96	3.8	Not Detected	Not Detected
Chloroform	0.96	4.7	Not Detected	Not Detected
1,1,1-Trichloroethane	0.96	5.3	Not Detected	Not Detected
Benzene	0.96	3.1	Not Detected	Not Detected
1,2-Dichloroethane	0.96	3.9	Not Detected	Not Detected
Trichloroethene	0.96	5.2	Not Detected	Not Detected
Tetrachloroethene	0.96	6.6	Not Detected	Not Detected
Chlorobenzene	0.96	4.5	Not Detected	Not Detected
alpha-Chlorotoluene	0.96	5.0	Not Detected	Not Detected
Acetone	3.8	9.2	Not Detected	Not Detected
Carbon Disulfide	3.8	12	Not Detected	Not Detected
trans-1,2-Dichloroethene	3.8	15	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.8	11	Not Detected	Not Detected
Bromodichloromethane	3.8	26	Not Detected	Not Detected
4-Methyl-2-pentanone	3.8	16	3.9	16
Bromoform	3.8	40	Not Detected	Not Detected
tert-Butylbenzene	3.8	21	Not Detected	Not Detected
Naphthalene	19	100	Not Detected	Not Detected
1,2-Dichlorobenzene	0.96	5.8	Not Detected	Not Detected
1,4-Dichlorobenzene	0.96	5.8	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	BLNK01	NA	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	92	70-130

AIR TOXICS LTD.

SAMPLE NAME: SVP-12-SG-033103

ID#: 0304003B-12A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d040119	Date of Collection: 3/31/03
Dil. Factor:	1.87	Date of Analysis: 4/1/03

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.94	2.4	Not Detected	Not Detected
Methylene Chloride	0.94	3.3	Not Detected	Not Detected
1,1-Dichloroethane	0.94	3.8	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.94	3.8	Not Detected	Not Detected
Chloroform	0.94	4.6	Not Detected	Not Detected
1,1,1-Trichloroethane	0.94	5.2	9.8	54
Benzene	0.94	3.0	Not Detected	Not Detected
1,2-Dichloroethane	0.94	3.8	Not Detected	Not Detected
Trichloroethene	0.94	5.1	Not Detected	Not Detected
Tetrachloroethene	0.94	6.4	2.9	20
Chlorobenzene	0.94	4.4	Not Detected	Not Detected
alpha-Chlorotoluene	0.94	4.9	Not Detected	Not Detected
Acetone	3.7	9.0	Not Detected	Not Detected
Carbon Disulfide	3.7	12	Not Detected	Not Detected
trans-1,2-Dichloroethene	3.7	15	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.7	11	Not Detected	Not Detected
Bromodichloromethane	3.7	25	Not Detected	Not Detected
4-Methyl-2-pentanone	3.7	16	Not Detected	Not Detected
Bromoform	3.7	39	Not Detected	Not Detected
tert-Butylbenzene	3.7	21	Not Detected	Not Detected
Naphthalene	19	100	Not Detected	Not Detected
1,2-Dichlorobenzene	0.94	5.7	Not Detected	Not Detected
1,4-Dichlorobenzene	0.94	5.7	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	BLNK01	NA	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	92	70-130

AIR TOXICS LTD.

SAMPLE NAME: SVP-12-SG-033103 Duplicate

ID#: 0304003B-12AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d040120	Date of Collection:	3/31/03
Dil. Factor:	1.87	Date of Analysis:	4/1/03

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.94	2.4	Not Detected	Not Detected
Methylene Chloride	0.94	3.3	Not Detected	Not Detected
1,1-Dichloroethane	0.94	3.8	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.94	3.8	Not Detected	Not Detected
Chloroform	0.94	4.6	Not Detected	Not Detected
1,1,1-Trichloroethane	0.94	5.2	9.4	52
Benzene	0.94	3.0	Not Detected	Not Detected
1,2-Dichloroethane	0.94	3.8	Not Detected	Not Detected
Trichloroethene	0.94	5.1	Not Detected	Not Detected
Tetrachloroethene	0.94	6.4	2.8	19
Chlorobenzene	0.94	4.4	Not Detected	Not Detected
alpha-Chlorotoluene	0.94	4.9	Not Detected	Not Detected
Acetone	3.7	9.0	Not Detected	Not Detected
Carbon Disulfide	3.7	12	Not Detected	Not Detected
trans-1,2-Dichloroethene	3.7	15	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.7	11	Not Detected	Not Detected
Bromodichloromethane	3.7	25	Not Detected	Not Detected
4-Methyl-2-pentanone	3.7	16	Not Detected	Not Detected
Bromoform	3.7	39	Not Detected	Not Detected
tert-Butylbenzene	3.7	21	Not Detected	Not Detected
Naphthalene	19	100	Not Detected	Not Detected
1,2-Dichlorobenzene	0.94	5.7	Not Detected	Not Detected
1,4-Dichlorobenzene	0.94	5.7	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	BLNK01	NA	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	92	70-130

AIR TOXICS LTD.

SAMPLE NAME: SVP-15-SG-033103

ID#: 0304003B-13A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d040123	Date of Collection: 3/31/03
Dil. Factor:	1.83	Date of Analysis: 4/2/03

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.92	2.4	Not Detected	Not Detected
Methylene Chloride	0.92	3.2	Not Detected	Not Detected
1,1-Dichloroethane	0.92	3.8	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.92	3.7	Not Detected	Not Detected
Chloroform	0.92	4.5	Not Detected	Not Detected
1,1,1-Trichloroethane	0.92	5.1	Not Detected	Not Detected
Benzene	0.92	3.0	Not Detected	Not Detected
1,2-Dichloroethane	0.92	3.8	Not Detected	Not Detected
Trichloroethene	0.92	5.0	Not Detected	Not Detected
Tetrachloroethene	0.92	6.3	Not Detected	Not Detected
Chlorobenzene	0.92	4.3	20	94
alpha-Chlorotoluene	0.92	4.8	Not Detected	Not Detected
Acetone	3.7	8.8	Not Detected	Not Detected
Carbon Disulfide	3.7	12	Not Detected	Not Detected
trans-1,2-Dichloroethene	3.7	15	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.7	11	Not Detected	Not Detected
Bromodichloromethane	3.7	25	Not Detected	Not Detected
4-Methyl-2-pentanone	3.7	15	7.8	32
Bromoform	3.7	38	Not Detected	Not Detected
tert-Butylbenzene	3.7	20	Not Detected	Not Detected
Naphthalene	18	97	Not Detected	Not Detected
1,2-Dichlorobenzene	0.92	5.6	8.2	50
1,4-Dichlorobenzene	0.92	5.6	3.2	20

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	BLNK01	NA	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	94	70-130

AIR TOXICS LTD.

SAMPLE NAME: SVP-8-SG-033103

ID#: 0304003B-14A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d040121	Date of Collection:	3/31/03
Dil. Factor:	1.87	Date of Analysis:	4/1/03

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.94	2.4	Not Detected	Not Detected
Methylene Chloride	0.94	3.3	Not Detected	Not Detected
1,1-Dichloroethane	0.94	3.8	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.94	3.8	Not Detected	Not Detected
Chloroform	0.94	4.6	11	53
1,1,1-Trichloroethane	0.94	5.2	Not Detected	Not Detected
Benzene	0.94	3.0	1.5	5.0
1,2-Dichloroethane	0.94	3.8	Not Detected	Not Detected
Trichloroethene	0.94	5.1	Not Detected	Not Detected
Tetrachloroethene	0.94	6.4	1.1	7.6
Chlorobenzene	0.94	4.4	Not Detected	Not Detected
alpha-Chlorotoluene	0.94	4.9	Not Detected	Not Detected
Acetone	3.7	9.0	11	28
Carbon Disulfide	3.7	12	Not Detected	Not Detected
trans-1,2-Dichloroethene	3.7	15	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.7	11	Not Detected	Not Detected
Bromodichloromethane	3.7	25	Not Detected	Not Detected
4-Methyl-2-pentanone	3.7	16	Not Detected	Not Detected
Bromoform	3.7	39	Not Detected	Not Detected
tert-Butylbenzene	3.7	21	Not Detected	Not Detected
Naphthalene	19	100	Not Detected	Not Detected
1,2-Dichlorobenzene	0.94	5.7	Not Detected	Not Detected
1,4-Dichlorobenzene	0.94	5.7	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	BLNK01	NA	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	93	70-130

AIR TOXICS LTD.

SAMPLE NAME: SVP-8-SG-033103 Duplicate

ID#: 0304003B-14AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d040122	Date of Collection:	3/31/03
Dil. Factor:	1.87	Date of Analysis:	4/1/03

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.94	2.4	Not Detected	Not Detected
Methylene Chloride	0.94	3.3	Not Detected	Not Detected
1,1-Dichloroethane	0.94	3.8	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.94	3.8	Not Detected	Not Detected
Chloroform	0.94	4.6	11	55
1,1,1-Trichloroethane	0.94	5.2	Not Detected	Not Detected
Benzene	0.94	3.0	1.6	5.1
1,2-Dichloroethane	0.94	3.8	Not Detected	Not Detected
Trichloroethene	0.94	5.1	Not Detected	Not Detected
Tetrachloroethene	0.94	6.4	1.1	7.8
Chlorobenzene	0.94	4.4	Not Detected	Not Detected
alpha-Chlorotoluene	0.94	4.9	Not Detected	Not Detected
Acetone	3.7	9.0	12	28
Carbon Disulfide	3.7	12	Not Detected	Not Detected
trans-1,2-Dichloroethene	3.7	15	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.7	11	Not Detected	Not Detected
Bromodichloromethane	3.7	25	Not Detected	Not Detected
4-Methyl-2-pentanone	3.7	16	Not Detected	Not Detected
Bromoform	3.7	39	Not Detected	Not Detected
tert-Butylbenzene	3.7	21	Not Detected	Not Detected
Naphthalene	19	100	Not Detected	Not Detected
1,2-Dichlorobenzene	0.94	5.7	Not Detected	Not Detected
1,4-Dichlorobenzene	0.94	5.7	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	BLNK01	NA	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	95	70-130

AIR TOXICS LTD.

SAMPLE NAME: SVP-10-SG-033103

ID#: 0304003B-15A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	b040115	Date of Collection: 3/31/03
Dil. Factor:	366	Date of Analysis: 4/1/03

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	180	480	Not Detected	Not Detected
Methylene Chloride	180	650	Not Detected	Not Detected
1,1-Dichloroethane	180	750	Not Detected	Not Detected
cis-1,2-Dichloroethene	180	740	Not Detected	Not Detected
Chloroform	180	910	Not Detected	Not Detected
1,1,1-Trichloroethane	180	1000	Not Detected	Not Detected
Benzene	180	590	680	2200
1,2-Dichloroethane	180	750	Not Detected	Not Detected
Trichloroethene	180	1000	Not Detected	Not Detected
Tetrachloroethene	180	1300	Not Detected	Not Detected
Chlorobenzene	180	860	31000	140000
alpha-Chlorotoluene	180	960	Not Detected U J	Not Detected U J
Acetone	730	1800	Not Detected	Not Detected
Carbon Disulfide	730	2300	Not Detected	Not Detected
trans-1,2-Dichloroethene	730	2900	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	730	2200	Not Detected	Not Detected
Bromodichloromethane	730	5000	Not Detected	Not Detected
4-Methyl-2-pentanone	730	3000	Not Detected	Not Detected
Bromoform	730	7700	Not Detected	Not Detected
tert-Butylbenzene	730	4100	Not Detected	Not Detected
Naphthalene	3700	19000	Not Detected	Not Detected
1,2-Dichlorobenzene	180	1100	870	5300
1,4-Dichlorobenzene	180	1100	4500	28000

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	BLNK01	NA	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	86	70-130

AIR TOXICS LTD.

SAMPLE NAME: SVP-100-SG-033103

ID#: 0304003B-16A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	b040116	Date of Collection: 3/31/03
Dil. Factor:	179	Date of Analysis: 4/1/03

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	90	230	Not Detected	Not Detected
Methylene Chloride	90	320	Not Detected	Not Detected
1,1-Dichloroethane	90	370	Not Detected	Not Detected
cis-1,2-Dichloroethene	90	360	Not Detected	Not Detected
Chloroform	90	440	Not Detected	Not Detected
1,1,1-Trichloroethane	90	500	Not Detected	Not Detected
Benzene	90	290	660	2200
1,2-Dichloroethane	90	370	Not Detected	Not Detected
Trichloroethene	90	490	Not Detected	Not Detected
Tetrachloroethene	90	620	Not Detected	Not Detected
Chlorobenzene	90	420	32000	150000
alpha-Chlorotoluene	90	470	Not Detected U J	Not Detected U J
Acetone	360	860	Not Detected	Not Detected
Carbon Disulfide	360	1100	Not Detected	Not Detected
trans-1,2-Dichloroethene	360	1400	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	360	1100	Not Detected	Not Detected
Bromodichloromethane	360	2400	Not Detected	Not Detected
4-Methyl-2-pentanone	360	1500	Not Detected	Not Detected
Bromoform	360	3800	Not Detected	Not Detected
tert-Butylbenzene	360	2000	Not Detected	Not Detected
Naphthalene	1800	9500	Not Detected	Not Detected
1,2-Dichlorobenzene	90	550	810	4900
1,4-Dichlorobenzene	90	550	4400	27000

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	BLNK01	NA	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	87	70-130

AIR TOXICS LTD.

SAMPLE NAME: SVP-11-SG-033103

ID#: 0304003B-17A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	b040117	Date of Collection:	3/31/03
Dil. Factor:	1.91	Date of Analysis:	4/1/03

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.96	2.5	Not Detected	Not Detected
Methylene Chloride	0.96	3.4	Not Detected	Not Detected
1,1-Dichloroethane	0.96	3.9	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.96	3.8	Not Detected	Not Detected
Chloroform	0.96	4.7	Not Detected	Not Detected
1,1,1-Trichloroethane	0.96	5.3	170	950
Benzene	0.96	3.1	Not Detected	Not Detected
1,2-Dichloroethane	0.96	3.9	Not Detected	Not Detected
Trichloroethene	0.96	5.2	Not Detected	Not Detected
Tetrachloroethene	0.96	6.6	92	630
Chlorobenzene	0.96	4.5	Not Detected	Not Detected
alpha-Chlorotoluene	0.96	5.0	Not Detected U J	Not Detected U J
Acetone	3.8	9.2	Not Detected	Not Detected
Carbon Disulfide	3.8	12	Not Detected	Not Detected
trans-1,2-Dichloroethene	3.8	15	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.8	11	Not Detected	Not Detected
Bromodichloromethane	3.8	26	Not Detected	Not Detected
4-Methyl-2-pentanone	3.8	16	Not Detected	Not Detected
Bromoform	3.8	40	Not Detected	Not Detected
tert-Butylbenzene	3.8	21	Not Detected	Not Detected
Naphthalene	19	100	Not Detected	Not Detected
1,2-Dichlorobenzene	0.96	5.8	Not Detected	Not Detected
1,4-Dichlorobenzene	0.96	5.8	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	BLNK01	NA	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	83	70-130

AIR TOXICS LTD.

SAMPLE NAME: SVP-9-SG-033103

ID#: 0304003B-18A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	b040120	Date of Collection:	3/31/03
Dil. Factor:	74.8	Date of Analysis:	4/1/03

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	37	97	Not Detected	Not Detected
Methylene Chloride	37	130	Not Detected	Not Detected
1,1-Dichloroethane	37	150	Not Detected	Not Detected
cis-1,2-Dichloroethene	37	150	Not Detected	Not Detected
Chloroform	37	180	Not Detected	Not Detected
1,1,1-Trichloroethane	37	210	Not Detected	Not Detected
Benzene	37	120	Not Detected	Not Detected
1,2-Dichloroethane	37	150	Not Detected	Not Detected
Trichloroethene	37	200	Not Detected	Not Detected
Tetrachloroethene	37	260	55	380
Chlorobenzene	37	180	Not Detected	Not Detected
alpha-Chlorotoluene	37	200	Not Detected U J	Not Detected U J
Acetone	150	360	Not Detected	Not Detected
Carbon Disulfide	150	470	Not Detected	Not Detected
trans-1,2-Dichloroethene	150	600	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	150	450	Not Detected	Not Detected
Bromodichloromethane	150	1000	Not Detected	Not Detected
4-Methyl-2-pentanone	150	620	Not Detected	Not Detected
Bromoform	150	1600	Not Detected	Not Detected
tert-Butylbenzene	150	830	Not Detected	Not Detected
Naphthalene	750	4000	Not Detected	Not Detected
1,2-Dichlorobenzene	37	230	46	280
1,4-Dichlorobenzene	37	230	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	BLNK01	NA	1800

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	120	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	84	70-130

AIR TOXICS LTD.

SAMPLE NAME: SVP-6-SG-033103

ID#: 0304003B-19A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	b040119	Date of Collection:	3/31/03
Dil. Factor:	1.91	Date of Analysis:	4/1/03

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.96	2.5	Not Detected	Not Detected
Methylene Chloride	0.96	3.4	Not Detected	Not Detected
1,1-Dichloroethane	0.96	3.9	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.96	3.8	Not Detected	Not Detected
Chloroform	0.96	4.7	Not Detected	Not Detected
1,1,1-Trichloroethane	0.96	5.3	Not Detected	Not Detected
Benzene	0.96	3.1	Not Detected	Not Detected
1,2-Dichloroethane	0.96	3.9	Not Detected	Not Detected
Trichloroethene	0.96	5.2	Not Detected	Not Detected
Tetrachloroethene	0.96	6.6	150	1000
Chlorobenzene	0.96	4.5	Not Detected	Not Detected
alpha-Chlorotoluene	0.96	5.0	Not Detected U J	Not Detected U J
Acetone	3.8	9.2	6.7	16
Carbon Disulfide	3.8	12	Not Detected	Not Detected
trans-1,2-Dichloroethene	3.8	15	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.8	11	Not Detected	Not Detected
Bromodichloromethane	3.8	26	Not Detected	Not Detected
4-Methyl-2-pentanone	3.8	16	Not Detected	Not Detected
Bromoform	3.8	40	Not Detected	Not Detected
tert-Butylbenzene	3.8	21	Not Detected	Not Detected
Naphthalene	19	100	Not Detected	Not Detected
1,2-Dichlorobenzene	0.96	5.8	Not Detected	Not Detected
1,4-Dichlorobenzene	0.96	5.8	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	BLNK01	NA	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	83	70-130

AIR TOXICS LTD.

SAMPLE NAME: SVP-Background Sample-033103

ID#: 0304003B-20A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	b040121	Date of Collection:	3/31/03
Dil. Factor:	1.83	Date of Analysis:	4/1/03

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.92	2.4	Not Detected	Not Detected
Methylene Chloride	0.92	3.2	Not Detected	Not Detected
1,1-Dichloroethane	0.92	3.8	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.92	3.7	Not Detected	Not Detected
Chloroform	0.92	4.5	Not Detected	Not Detected
1,1,1-Trichloroethane	0.92	5.1	Not Detected	Not Detected
Benzene	0.92	3.0	Not Detected	Not Detected
1,2-Dichloroethane	0.92	3.8	Not Detected	Not Detected
Trichloroethene	0.92	5.0	Not Detected	Not Detected
Tetrachloroethene	0.92	6.3	Not Detected	Not Detected
Chlorobenzene	0.92	4.3	Not Detected	Not Detected
alpha-Chlorotoluene	0.92	4.8	Not Detected U J	Not Detected U J
Acetone	3.7	8.8	Not Detected	Not Detected
Carbon Disulfide	3.7	12	Not Detected	Not Detected
trans-1,2-Dichloroethene	3.7	15	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.7	11	Not Detected	Not Detected
Bromodichloromethane	3.7	25	Not Detected	Not Detected
4-Methyl-2-pentanone	3.7	15	Not Detected	Not Detected
Bromoform	3.7	38	Not Detected	Not Detected
tert-Butylbenzene	3.7	20	Not Detected	Not Detected
Naphthalene	18	97	Not Detected	Not Detected
1,2-Dichlorobenzene	0.92	5.6	Not Detected	Not Detected
1,4-Dichlorobenzene	0.92	5.6	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	BLNK01	NA	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	84	70-130

AIR TOXICS LTD.

SAMPLE NAME: Trip Blank 033103

ID#: 0304003B-21A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	b040122	Date of Collection:	3/31/03
Dil. Factor:	1.00	Date of Analysis:	4/1/03

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.50	1.3	Not Detected	Not Detected
Methylene Chloride	0.50	1.8	Not Detected	Not Detected
1,1-Dichloroethane	0.50	2.0	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.50	2.0	Not Detected	Not Detected
Chloroform	0.50	2.5	Not Detected	Not Detected
1,1,1-Trichloroethane	0.50	2.8	Not Detected	Not Detected
Benzene	0.50	1.6	Not Detected	Not Detected
1,2-Dichloroethane	0.50	2.0	Not Detected	Not Detected
Trichloroethene	0.50	2.7	Not Detected	Not Detected
Tetrachloroethene	0.50	3.4	Not Detected	Not Detected
Chlorobenzene	0.50	2.3	Not Detected	Not Detected
alpha-Chlorotoluene	0.50	2.6	Not Detected U J	Not Detected U J
Acetone	2.0	4.8	Not Detected	Not Detected
Carbon Disulfide	2.0	6.3	Not Detected	Not Detected
trans-1,2-Dichloroethene	2.0	8.0	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	6.0	Not Detected	Not Detected
Bromodichloromethane	2.0	14	Not Detected	Not Detected
4-Methyl-2-pentanone	2.0	8.3	Not Detected	Not Detected
Bromoform	2.0	21	Not Detected	Not Detected
tert-Butylbenzene	2.0	11	Not Detected	Not Detected
Naphthalene	10	53	Not Detected	Not Detected
1,2-Dichlorobenzene	0.50	3.0	Not Detected	Not Detected
1,4-Dichlorobenzene	0.50	3.0	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	BLNK01	NA	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	83	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0304003B-22A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d040107	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	4/1/03

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.50	1.3	Not Detected	Not Detected
Methylene Chloride	0.50	1.8	Not Detected	Not Detected
1,1-Dichloroethane	0.50	2.0	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.50	2.0	Not Detected	Not Detected
Chloroform	0.50	2.5	Not Detected	Not Detected
1,1,1-Trichloroethane	0.50	2.8	Not Detected	Not Detected
Benzene	0.50	1.6	Not Detected	Not Detected
1,2-Dichloroethane	0.50	2.0	Not Detected	Not Detected
Trichloroethene	0.50	2.7	Not Detected	Not Detected
Tetrachloroethene	0.50	3.4	Not Detected	Not Detected
Chlorobenzene	0.50	2.3	Not Detected	Not Detected
alpha-Chlorotoluene	0.50	2.6	Not Detected	Not Detected
Acetone	2.0	4.8	Not Detected	Not Detected
Carbon Disulfide	2.0	6.3	Not Detected	Not Detected
trans-1,2-Dichloroethene	2.0	8.0	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	6.0	Not Detected	Not Detected
Bromodichloromethane	2.0	14	Not Detected	Not Detected
4-Methyl-2-pentanone	2.0	8.3	Not Detected	Not Detected
Bromoform	2.0	21	Not Detected	Not Detected
tert-Butylbenzene	2.0	11	Not Detected	Not Detected
Naphthalene	10	53	Not Detected	Not Detected
1,2-Dichlorobenzene	0.50	3.0	Not Detected	Not Detected
1,4-Dichlorobenzene	0.50	3.0	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrahydrofuran	BLNK01	NA	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	93	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0304003B-22B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	b040107	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 4/1/03	

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.50	1.3	Not Detected	Not Detected
Methylene Chloride	0.50	1.8	Not Detected	Not Detected
1,1-Dichloroethane	0.50	2.0	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.50	2.0	Not Detected	Not Detected
Chloroform	0.50	2.5	Not Detected	Not Detected
1,1,1-Trichloroethane	0.50	2.8	Not Detected	Not Detected
Benzene	0.50	1.6	Not Detected	Not Detected
1,2-Dichloroethane	0.50	2.0	Not Detected	Not Detected
Trichloroethene	0.50	2.7	Not Detected	Not Detected
Tetrachloroethene	0.50	3.4	Not Detected	Not Detected
Chlorobenzene	0.50	2.3	Not Detected	Not Detected
alpha-Chlorotoluene	0.50	2.6	Not Detected U J	Not Detected U J
Acetone	2.0	4.8	Not Detected	Not Detected
Carbon Disulfide	2.0	6.3	Not Detected	Not Detected
trans-1,2-Dichloroethene	2.0	8.0	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	6.0	Not Detected	Not Detected
Bromodichloromethane	2.0	14	Not Detected	Not Detected
4-Methyl-2-pentanone	2.0	8.3	Not Detected	Not Detected
Bromoform	2.0	21	Not Detected	Not Detected
tert-Butylbenzene	2.0	11	Not Detected	Not Detected
Naphthalene	10	53	Not Detected	Not Detected
1,2-Dichlorobenzene	0.50	3.0	Not Detected	Not Detected
1,4-Dichlorobenzene	0.50	3.0	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrahydrofuran	BLNK01	NA	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	83	70-130

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0304003B-23A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d040102	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 4/1/03	

Compound	%Recovery
Vinyl Chloride	85
Methylene Chloride	80
1,1-Dichloroethane	84
cis-1,2-Dichloroethene	85
Chloroform	85
1,1,1-Trichloroethane	89
Benzene	85
1,2-Dichloroethane	85
Trichloroethene	86
Tetrachloroethene	84
Chlorobenzene	84
alpha-Chlorotoluene	88
Acetone	90
Carbon Disulfide	88
trans-1,2-Dichloroethene	87
2-Butanone (Methyl Ethyl Ketone)	90
Bromodichloromethane	95
4-Methyl-2-pentanone	94
Bromoform	98
tert-Butylbenzene	110
Naphthalene	92
1,2-Dichlorobenzene	84
1,4-Dichlorobenzene	87

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	BLNK01	NA	Not Spiked

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	98	70-130

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0304003B-23B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	b040102	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 4/1/03	

Compound	%Recovery
Vinyl Chloride	104
Methylene Chloride	108
1,1-Dichloroethane	114
cis-1,2-Dichloroethene	115
Chloroform	111
1,1,1-Trichloroethane	111
Benzene	108
1,2-Dichloroethane	121
Trichloroethene	114
Tetrachloroethene	118
Chlorobenzene	105
alpha-Chlorotoluene	61 Q
Acetone	94
Carbon Disulfide	81
trans-1,2-Dichloroethene	81
2-Butanone (Methyl Ethyl Ketone)	100
Bromodichloromethane	92
4-Methyl-2-pentanone	106
Bromoform	84
tert-Butylbenzene	77
Naphthalene	90
1,2-Dichlorobenzene	70
1,4-Dichlorobenzene	74

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	BLNK01	NA	Not Spiked

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	85	70-130

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0304003B-24A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d040103	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 4/1/03	

Compound	%Recovery
Vinyl Chloride	90
Methylene Chloride	78
1,1-Dichloroethane	74
cis-1,2-Dichloroethene	84
Chloroform	81
1,1,1-Trichloroethane	83
Benzene	90
1,2-Dichloroethane	85
Trichloroethene	89
Tetrachloroethene	89
Chlorobenzene	85
alpha-Chlorotoluene	99
Acetone	84
Carbon Disulfide	85
trans-1,2-Dichloroethene	88
2-Butanone (Methyl Ethyl Ketone)	84
Bromodichloromethane	85
4-Methyl-2-pentanone	86
Bromoform	81
tert-Butylbenzene	Not Spiked
Naphthalene	Not Spiked
1,2-Dichlorobenzene	85
1,4-Dichlorobenzene	82

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	BLNK01	NA	Not Spiked

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	98	70-130

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0304003B-24B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	b040104	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 4/1/03	

Compound	%Recovery
Vinyl Chloride	122
Methylene Chloride	109
1,1-Dichloroethane	104
cis-1,2-Dichloroethene	119
Chloroform	110
1,1,1-Trichloroethane	110
Benzene	117
1,2-Dichloroethane	126
Trichloroethene	122
Tetrachloroethene	129
Chlorobenzene	109
alpha-Chlorotoluene	68 Q
Acetone	88
Carbon Disulfide	80
trans-1,2-Dichloroethene	87
2-Butanone (Methyl Ethyl Ketone)	95
Bromodichloromethane	82
4-Methyl-2-pentanone	96
Bromoform	70
tert-Butylbenzene	Not Spiked
Naphthalene	Not Spiked
1,2-Dichlorobenzene	71
1,4-Dichlorobenzene	71

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	BLNK01	NA	Not Spiked

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	86	70-130

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CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice

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180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX: (916) 985-1020

Contact Person: Mike Susca
Company: TRC Environmental
Address: 5 Waterside Crossing City: Windsor State: CT Zip: 06095
Phone: (860) 298-6234 FAX: (860) 298-6399
Collected By: (Signature) Kate Lawniel

Project Info:
P.O. #:
Project #: 38182
Project Name: Solutia/Sauget

Turn Around Time:
☐ Normal
☑ Rush SEE NOTES (Specify)

mc 4-01-03

Lab I.D	Field Sample I.D.	Date & Time	Analyses Requested	Canister Pressure / Vacuum: Initial	Final	Receipt
11A	SVP-16-SG-033103	3/31/03 ~ 1022	TO-15 refer to list previously submitted	29	8.5	9.0"
12A	SVP-12-SG-033103	3/31/03 ~ 1041	TO-15 " "	28.5	8.5	8.5"
13A	SVP-15-SG-033103	3/31/03 ~ 1145	TO-15 " "	29.0	9.0	8.0"
14A	SVP-8-SG-033103	3/31/03 ~ 1159	TO-15 " "	29.0	8.0	8.5"

Relinquished By: (Signature) Date/Time: Kate Lawniel 3/31/03 1615
Received By: (Signature) Date/Time:
Relinquished By: (Signature) Date/Time:
Received By: (Signature) Date/Time:
Relinquished By: (Signature) Date/Time:
Received By: (Signature) Date/Time: Tonya Boddie ATL 4/1/03 920

Notes: 48 hour TAT on analysis
Standard TAT on report

Lab Use Only

Shipper Name	Air Bill #	Opened By:	Temp. °C	Condition	Custody Seals Intact?	Work Order #
FedEx	8834 5504 3508	TB	—	Good	(Yes) No None	030400 3B

Form TOXIS rev 04

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CHAIN-OF-CUSTODY RECORD

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180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX: (916) 985-1020

Contact Person: Mike Susca
Company: TRC Environmental
Address: 5 Waterside Crossing City: Windsor State: CT Zip: 06095
Phone: (860) 298-6234 FAX: (860) 298-6399
Collected By: Signature: Kate Launer

Project Info:
P.O. #
Project #: 38182
Project Name: Solutia Sawyer

Turn Around Time:
☐ Normal
☒ Rush See notes Specify
mc 4.01.03

Lab ID	Field Sample I.D.	Date & Time	Analyses Requested	Canister Pressure / Vacuum Initial	Final	Receipt
15A	SVP-10-Sa-033103	3/31/03 ~ 1412	TO-15 - refer to analytical test previously submitted	30	8	8.0 "Hg
16A	SVP-100-Sa-033103	3/31/03 ~ 1412	TO-15 - " " "	29	9	7.5 "Hg

Relinquished By: (Signature) Date/Time: Kate Launer 3/31/03 1640
Received By: (Signature) Date/Time:
Relinquished By: (Signature) Date/Time:
Received By: (Signature) Date/Time:
Relinquished By: (Signature) Date/Time:
Received By: (Signature) Date/Time: Tom Kozbial ATL 4/1/03 920

Notes:
48 hour TAT on analysis
Standard TAT in report

Lab Use Only	Shipper Name	Air Bill #	Opened By:	Temp. (°C)	Condition:	Custody Seals Intact?	Work Order #
	FedEx	8334 3504 3508	TB	—	Good	Yes / No / None	03040038

Form 1232 rev 03

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CHAIN-OF-CUSTODY RECORD

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180 BLUE RAVINE ROAD SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX: (916) 985-1020

Contact Person: MIKE SUSCA
Company: TRC Environmental
Address: 5 Waterside Crossing City: Windsor State: CT Zip: 06095
Phone: (860) 298-6234 FAX: (860) 298-6399
Collected By: Signature: [signature]

Project info:
P.O. #: ___
Project #: 38182
Project Name: Schutte/Saugat

Turn Around Time:
☐ Normal
☒ Rush: See Notes (Specify)

ML 4.01.03

Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested	Canister Pressure / Vacuum Initial	Final	Receipt
17A	SVP-11-SG-033103	3/31/03 ~ 1548	TO-15 — refer to analyte list previously submitted	28.5	8.5	9.0"Hg
18A	SVP-9-SG-033103	3/31/03 ~ 1542	TO-15 — " "	28.5	8.5	8.5"Hg
19A	SVP-6-SG-033103	3/31/03 ~ 1528	TO-15 — " "	29	9	9.0"Hg
20A	Background Sample-033103	3/31/03 ~ 1547	TO-15 — " "	28	7.5	8.0"Hg

Relinquished By: (Signature) Date/Time: [signature] 3/31/03 1625
Received By: (Signature) Date/Time: [signature] Alvarado ATL 4/1/03 915
Relinquished By: (Signature) Date/Time:
Received By: (Signature) Date/Time:
Relinquished By: (Signature) Date/Time:
Received By: (Signature) Date/Time: RB 4/1/03

Notes:
48 hr TAT on analysis
Standard TAT on report

Lab Use Only	Shipper Name	Air Bill #	Opened By:	Temp. (°C)	Condition	Custody Seals Intact?	Work Order #
	Fed Ex	833455043508	CA	—	Good	(Yes) No None	0304003B

Form 1293 rev. 03

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CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice

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180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX: (916) 985-1020

Contact Person: Mike Susca
Company: TRC Environmental
Address: 5 Waterside Crossing City: Windsor State: CT Zip: 06095
Phone: (860) 298-6234 FAX: (860) 298-6399
Collected By: (Signature) Kate Leuner

Project Info:
P.O. #:
Project #: 38182
Project Name: Solutia/Sawgrass

Turn Around Time:
☐ Normal
☒ Rush
Specify
ML 4.01-7

Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested	Canister Pressure / Vacuum Initial	Final	Receipt
21A	Trip Blank 033103	3/31/03 1830	TO-15 refer to analyte list already submitted	NA	NA	NA 29.0"Hg
5	Trip Blank 033103	3/31/03 1835	TO-13 " "	NA	NA	NA

Relinquished By: (Signature) Date/Time: Kate Leuner 3/31/03 1830
Received By: (Signature) Date/Time:
Relinquished By: (Signature) Date/Time:
Received By: (Signature) Date/Time: Tanya Bartol ATL 4/1/03 920

Notes:
48 hr TAT for analysis
Standard TAT for report

Lab Use Only	Shipper Name	Air Bill #	Opened By:	Temp. (°C)	Condition	Custody Seals Intact?	Work Order #
	FedEx	833450435085	TB	—	Good	(Yes) No None	03040038

Form 1265 rev. 5/9

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Air Toxics Ltd. Introduces the Electronic Report

Thank you for choosing Air Toxics Ltd. To better serve our customers, we are providing your report by e-mail. This document is provided in Portable Document Format which can be viewed with Acrobat Reader by Adobe.

This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

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E-mail to: samplereceiving@airtoxics.com

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AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0304003A

Work Order Summary

CLIENT:	Mr. Gary Ritter TRC Environmental Corporation 5 Waterside Crossing Windsor, CT 06095	**BILL TO:**	Mr. Gary Ritter TRC Environmental Corporation 5 Waterside Crossing Windsor, CT 06095
PHONE:	860-298-6300	**P.O. #**	
FAX:		**PROJECT #**	38182 Solutia
DATE RECEIVED:	4/1/03	**CONTACT:**	Betty Chu
DATE COMPLETED:	4/14/03		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.
01A	BBZ-Office-9910	Modified TO-15/TIC	6.5 "Hg
02A	BBZ-Intake-9584	Modified TO-15/TIC	6.5 "Hg
03A	BBG-Office-9571	Modified TO-15/TIC	6.5 "Hg
04A	BBG-Intake-96105	Modified TO-15/TIC	4.5 "Hg
05A	CCB-Office-TO1560	Modified TO-15/TIC	6.5 "Hg
06A	CCB-Intake-14883	Modified TO-15/TIC	4.5 "Hg
07A	BK-1st Fl. Office-24489	Modified TO-15/TIC	6.5 "Hg
08A	BK-Intake-33584	Modified TO-15/TIC	4.5 "Hg
09A	BK-Dist-TO1627	Modified TO-15/TIC	6.5 "Hg
10A	BK-Dist-Duplicate-1584	Modified TO-15/TIC	6.5 "Hg
11A	Lab Blank	Modified TO-15/TIC	NA
11B	Lab Blank	Modified TO-15/TIC	NA
12A	CCV	Modified TO-15/TIC	NA
12B	CCV	Modified TO-15/TIC	NA
13A	LCS	Modified TO-15/TIC	NA
13B	LCS	Modified TO-15/TIC	NA

CERTIFIED BY: Linda S. Frumarx DATE: 04/14/03

Laboratory Director

Certfication numbers: AR DEQ, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/02, Expiration date: 06/30/03
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified TO-15
TRC Environmental Corporation
Workorder# 0304003A

Ten 6 Liter Summa Canister samples were received on April 01, 2003. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.5 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

Requirement	*TO-15*	*ATL Modifications*
BFB acceptance criteria	CLP protocol	SW-846 protocol
Concentration of IS spike	10 ppbv	25 ppbv when 0.5/2.0 ppbv is used for the reporting limt
Dilutions for initial calibration	Dynamic dilutions or static using canisters	Syringe dilutions
IS recoveries	Within 40% of mean over ICAL for blanks, and w/in 40% of daily CCV for samples.	Within 40% of CCV recoveries for blank and samples.
Daily CCV	30% Difference	30% Difference with two allowed out up to 40%.
Primary ions for Quantification	Freon 114: 85, Carbon Tetrachloride: 117, Trichloroethene: 130, Ethyl Benzene, m,p- and o-Xylene: 91	Freon 114: 135, Carbon Tetrachloride: 119, Trichloroethene: 95, Ethyl Benzene, m,p- and o-Xylene: 106

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

Sample CCB-Office-TO1560 was analyzed 19 minutes past a 72 hour hold time. The client was notified and permission given to proceed with analysis and reporting.

The following compound, alpha-Chlorotoluene, indicated low bias (less than 70% expected recovery) in the daily CCV analyzed on 04/01/03. Associated non-detects in samples BBZ-Office-9910, BBZ-Intake-9584, BBG-Office-9571 and BBG-Intake-96105 were flagged to indicate estimated results with low bias.

The reported CCV for each daily batch may be derived from more than one individual analytical file due to the client's request for non-standard compounds.

Specific analytes that are requested by the client to be reported as tentatively identified compounds (TICs) are determined by searching for each compound's characteristic spectra. If no chromatographic peak displaying the compound specific spectra exists, then the TIC is reported as not detected. Please note that the laboratory has not evaluated the stability of any heretofore tentatively identified compound in the vapor phase or for efficiency of recovery through the analytical system.

By specific client request, Tetrafluoroethane was reported as a tentatively identified compound (TIC) to assist in evaluation of the client sampling system.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated Peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: BBZ-Office-9910

ID#: 0304003A-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	b040108	Date of Collection: 3/29/03
Dil. Factor:	1.71	Date of Analysis: 4/1/03

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.86	2.2	Not Detected	Not Detected
Methylene Chloride	0.86	3.0	60	210
1,1-Dichloroethane	0.86	3.5	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.86	3.4	Not Detected	Not Detected
Chloroform	0.86	4.2	Not Detected	Not Detected
1,1,1-Trichloroethane	0.86	4.7	Not Detected	Not Detected
Benzene	0.86	2.8	Not Detected	Not Detected
1,2-Dichloroethane	0.86	3.5	Not Detected	Not Detected
Trichloroethene	0.86	4.7	Not Detected	Not Detected
Tetrachloroethene	0.86	5.9	Not Detected	Not Detected
Chlorobenzene	0.86	4.0	Not Detected	Not Detected
alpha-Chlorotoluene	0.86	4.5	Not Detected U J	Not Detected U J
Acetone	3.4	8.2	7.4	18
Carbon Disulfide	3.4	11	Not Detected	Not Detected
trans-1,2-Dichloroethene	3.4	14	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.4	10	20	61
Bromodichloromethane	3.4	23	Not Detected	Not Detected
4-Methyl-2-pentanone	3.4	14	130	530
Bromoform	3.4	36	Not Detected	Not Detected
tert-Butylbenzene	3.4	19	Not Detected	Not Detected
Naphthalene	17	91	Not Detected	Not Detected
1,2-Dichlorobenzene	0.86	5.2	Not Detected	Not Detected
1,4-Dichlorobenzene	0.86	5.2	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	BLNK01	NA	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	84	70-130

AIR TOXICS LTD.

SAMPLE NAME: BBZ-Intake-9584

ID#: 0304003A-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	b040109	Date of Collection:	3/29/03
Dil. Factor:	1.71	Date of Analysis:	4/1/03

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.86	2.2	Not Detected	Not Detected
Methylene Chloride	0.86	3.0	25	88
1,1-Dichloroethane	0.86	3.5	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.86	3.4	Not Detected	Not Detected
Chloroform	0.86	4.2	Not Detected	Not Detected
1,1,1-Trichloroethane	0.86	4.7	Not Detected	Not Detected
Benzene	0.86	2.8	Not Detected	Not Detected
1,2-Dichloroethane	0.86	3.5	Not Detected	Not Detected
Trichloroethene	0.86	4.7	Not Detected	Not Detected
Tetrachloroethene	0.86	5.9	Not Detected	Not Detected
Chlorobenzene	0.86	4.0	Not Detected	Not Detected
alpha-Chlorotoluene	0.86	4.5	Not Detected U J	Not Detected U J
Acetone	3.4	8.2	5.2	12
Carbon Disulfide	3.4	11	Not Detected	Not Detected
trans-1,2-Dichloroethene	3.4	14	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.4	10	22	67
Bromodichloromethane	3.4	23	Not Detected	Not Detected
4-Methyl-2-pentanone	3.4	14	160	660
Bromoform	3.4	36	Not Detected	Not Detected
tert-Butylbenzene	3.4	19	Not Detected	Not Detected
Naphthalene	17	91	Not Detected	Not Detected
1,2-Dichlorobenzene	0.86	5.2	Not Detected	Not Detected
1,4-Dichlorobenzene	0.86	5.2	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	359-35-3	NA	Not Detected
Tetrafluoroethane	BLNK01	NA	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	84	70-130

AIR TOXICS LTD.

SAMPLE NAME: BBG-Office-9571

ID#: 0304003A-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	b040110	Date of Collection:	3/29/03
Dil. Factor:	1.71	Date of Analysis:	4/1/03

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.86	2.2	Not Detected	Not Detected
Methylene Chloride	0.86	3.0	87	310
1,1-Dichloroethane	0.86	3.5	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.86	3.4	Not Detected	Not Detected
Chloroform	0.86	4.2	Not Detected	Not Detected
1,1,1-Trichloroethane	0.86	4.7	Not Detected	Not Detected
Benzene	0.86	2.8	0.86	2.8
1,2-Dichloroethane	0.86	3.5	Not Detected	Not Detected
Trichloroethene	0.86	4.7	Not Detected	Not Detected
Tetrachloroethene	0.86	5.9	Not Detected	Not Detected
Chlorobenzene	0.86	4.0	0.86	4.0
alpha-Chlorotoluene	0.86	4.5	Not Detected U J	Not Detected U J
Acetone	3.4	8.2	110	260
Carbon Disulfide	3.4	11	Not Detected	Not Detected
trans-1,2-Dichloroethene	3.4	14	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.4	10	21	62
Bromodichloromethane	3.4	23	Not Detected	Not Detected
4-Methyl-2-pentanone	3.4	14	5.4	22
Bromoform	3.4	36	Not Detected	Not Detected
tert-Butylbenzene	3.4	19	Not Detected	Not Detected
Naphthalene	17	91	Not Detected	Not Detected
1,2-Dichlorobenzene	0.86	5.2	Not Detected	Not Detected
1,4-Dichlorobenzene	0.86	5.2	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	359-35-3	NA	Not Detected
Tetrafluoroethane	BLNK01	NA	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	92	70-130

AIR TOXICS LTD.

SAMPLE NAME: BBG-Intake-96105

ID#: 0304003A-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	b040111	Date of Collection:	3/29/03
Dil. Factor:	1.58	Date of Analysis:	4/1/03

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.79	2.0	Not Detected	Not Detected
Methylene Chloride	0.79	2.8	Not Detected	Not Detected
1,1-Dichloroethane	0.79	3.2	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.79	3.2	Not Detected	Not Detected
Chloroform	0.79	3.9	Not Detected	Not Detected
1,1,1-Trichloroethane	0.79	4.4	Not Detected	Not Detected
Benzene	0.79	2.6	Not Detected	Not Detected
1,2-Dichloroethane	0.79	3.2	Not Detected	Not Detected
Trichloroethene	0.79	4.3	Not Detected	Not Detected
Tetrachloroethene	0.79	5.4	Not Detected	Not Detected
Chlorobenzene	0.79	3.7	Not Detected	Not Detected
alpha-Chlorotoluene	0.79	4.2	Not Detected U J	Not Detected U J
Acetone	3.2	7.6	Not Detected	Not Detected
Carbon Disulfide	3.2	10	Not Detected	Not Detected
trans-1,2-Dichloroethene	3.2	13	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.2	9.5	9.8	30
Bromodichloromethane	3.2	22	Not Detected	Not Detected
4-Methyl-2-pentanone	3.2	13	Not Detected	Not Detected
Bromoform	3.2	33	Not Detected	Not Detected
tert-Butylbenzene	3.2	18	Not Detected	Not Detected
Naphthalene	16	84	Not Detected	Not Detected
1,2-Dichlorobenzene	0.79	4.8	Not Detected	Not Detected
1,4-Dichlorobenzene	0.79	4.8	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	359-35-3	NA	Not Detected
Tetrafluoroethane	BLNK01	NA	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	84	70-130

AIR TOXICS LTD.

SAMPLE NAME: CCB-Office-TO1560

ID#: 0304003A-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d040116	Date of Collection:	3/29/03
Dil. Factor:	2.74	Date of Analysis:	4/1/03

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	1.4	3.6	Not Detected	Not Detected
Methylene Chloride	1.4	4.8	440	1600
1,1-Dichloroethane	1.4	5.6	Not Detected	Not Detected
cis-1,2-Dichloroethene	1.4	5.5	Not Detected	Not Detected
Chloroform	1.4	6.8	Not Detected	Not Detected
1,1,1-Trichloroethane	1.4	7.6	Not Detected	Not Detected
Benzene	1.4	4.4	Not Detected	Not Detected
1,2-Dichloroethane	1.4	5.6	Not Detected	Not Detected
Trichloroethene	1.4	7.5	Not Detected	Not Detected
Tetrachloroethene	1.4	9.4	Not Detected	Not Detected
Chlorobenzene	1.4	6.4	1.6	7.7
alpha-Chlorotoluene	1.4	7.2	Not Detected	Not Detected
Acetone	5.5	13	20	49
Carbon Disulfide	5.5	17	Not Detected	Not Detected
trans-1,2-Dichloroethene	5.5	22	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	5.5	16	Not Detected	Not Detected
Bromodichloromethane	5.5	37	Not Detected	Not Detected
4-Methyl-2-pentanone	5.5	23	Not Detected	Not Detected
Bromoform	5.5	58	Not Detected	Not Detected
tert-Butylbenzene	5.5	30	Not Detected	Not Detected
Naphthalene	27	140	Not Detected	Not Detected
1,2-Dichlorobenzene	1.4	8.4	Not Detected	Not Detected
1,4-Dichlorobenzene	1.4	8.4	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	359-35-3	NA	Not Detected
Tetrafluoroethane	BLNK01	NA	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	92	70-130

AIR TOXICS LTD.

SAMPLE NAME: CCB-Intake-14883

ID#: 0304003A-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d040112	Date of Collection: 3/29/03
Dil. Factor:	1.58	Date of Analysis: 4/1/03

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.79	2.0	Not Detected	Not Detected
Methylene Chloride	0.79	2.8	3.1	11
1,1-Dichloroethane	0.79	3.2	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.79	3.2	Not Detected	Not Detected
Chloroform	0.79	3.9	Not Detected	Not Detected
1,1,1-Trichloroethane	0.79	4.4	Not Detected	Not Detected
Benzene	0.79	2.6	0.92	3.0
1,2-Dichloroethane	0.79	3.2	Not Detected	Not Detected
Trichloroethene	0.79	4.3	Not Detected	Not Detected
Tetrachloroethene	0.79	5.4	Not Detected	Not Detected
Chlorobenzene	0.79	3.7	1.0	4.7
alpha-Chlorotoluene	0.79	4.2	Not Detected	Not Detected
Acetone	3.2	7.6	3.4	8.3
Carbon Disulfide	3.2	10	Not Detected	Not Detected
trans-1,2-Dichloroethene	3.2	13	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.2	9.5	Not Detected	Not Detected
Bromodichloromethane	3.2	22	Not Detected	Not Detected
4-Methyl-2-pentanone	3.2	13	Not Detected	Not Detected
Bromoform	3.2	33	Not Detected	Not Detected
tert-Butylbenzene	3.2	18	Not Detected	Not Detected
Naphthalene	16	84	Not Detected	Not Detected
1,2-Dichlorobenzene	0.79	4.8	Not Detected	Not Detected
1,4-Dichlorobenzene	0.79	4.8	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	359-35-3	NA	Not Detected
Tetrafluoroethane	BLNK01	NA	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	92	70-130

AIR TOXICS LTD.

SAMPLE NAME: BK-1st Fl. Office-24489

ID#: 0304003A-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d040108	Date of Collection:	3/29/03
Dil. Factor:	1.71	Date of Analysis:	4/1/03

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.86	2.2	Not Detected	Not Detected
Methylene Chloride	0.86	3.0	13	45
1,1-Dichloroethane	0.86	3.5	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.86	3.4	Not Detected	Not Detected
Chloroform	0.86	4.2	Not Detected	Not Detected
1,1,1-Trichloroethane	0.86	4.7	Not Detected	Not Detected
Benzene	0.86	2.8	Not Detected	Not Detected
1,2-Dichloroethane	0.86	3.5	Not Detected	Not Detected
Trichloroethene	0.86	4.7	Not Detected	Not Detected
Tetrachloroethene	0.86	5.9	Not Detected	Not Detected
Chlorobenzene	0.86	4.0	Not Detected	Not Detected
alpha-Chlorotoluene	0.86	4.5	Not Detected	Not Detected
Acetone	3.4	8.2	4.4	11
Carbon Disulfide	3.4	11	Not Detected	Not Detected
trans-1,2-Dichloroethene	3.4	14	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.4	10	Not Detected	Not Detected
Bromodichloromethane	3.4	23	Not Detected	Not Detected
4-Methyl-2-pentanone	3.4	14	Not Detected	Not Detected
Bromoform	3.4	36	Not Detected	Not Detected
tert-Butylbenzene	3.4	19	Not Detected	Not Detected
Naphthalene	17	91	Not Detected	Not Detected
1,2-Dichlorobenzene	0.86	5.2	Not Detected	Not Detected
1,4-Dichlorobenzene	0.86	5.2	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	359-35-3	NA	Not Detected
Tetrafluoroethane	BLNK01	NA	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	91	70-130

AIR TOXICS LTD.

SAMPLE NAME: BK-Intake-33584

ID#: 0304003A-08A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d040111	Date of Collection: 3/29/03
Dil. Factor:	1.58	Date of Analysis: 4/1/03

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.79	2.0	Not Detected	Not Detected
Methylene Chloride	0.79	2.8	2.2	8.0
1,1-Dichloroethane	0.79	3.2	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.79	3.2	Not Detected	Not Detected
Chloroform	0.79	3.9	Not Detected	Not Detected
1,1,1-Trichloroethane	0.79	4.4	Not Detected	Not Detected
Benzene	0.79	2.6	Not Detected	Not Detected
1,2-Dichloroethane	0.79	3.2	Not Detected	Not Detected
Trichloroethene	0.79	4.3	Not Detected	Not Detected
Tetrachloroethene	0.79	5.4	Not Detected	Not Detected
Chlorobenzene	0.79	3.7	0.94	4.4
alpha-Chlorotoluene	0.79	4.2	Not Detected	Not Detected
Acetone	3.2	7.6	4.5	11
Carbon Disulfide	3.2	10	Not Detected	Not Detected
trans-1,2-Dichloroethene	3.2	13	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.2	9.5	Not Detected	Not Detected
Bromodichloromethane	3.2	22	Not Detected	Not Detected
4-Methyl-2-pentanone	3.2	13	Not Detected	Not Detected
Bromoform	3.2	33	Not Detected	Not Detected
tert-Butylbenzene	3.2	18	Not Detected	Not Detected
Naphthalene	16	84	Not Detected	Not Detected
1,2-Dichlorobenzene	0.79	4.8	Not Detected	Not Detected
1,4-Dichlorobenzene	0.79	4.8	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	359-35-3	NA	Not Detected
Tetrafluoroethane	BLNK01	NA	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	91	70-130

AIR TOXICS LTD.

SAMPLE NAME: BK-Dist-TO1627

ID#: 0304003A-09A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d040109	Date of Collection:	3/29/03
Dil. Factor:	1.71	Date of Analysis:	4/1/03

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.86	2.2	Not Detected	Not Detected
Methylene Chloride	0.86	3.0	24	86
1,1-Dichloroethane	0.86	3.5	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.86	3.4	Not Detected	Not Detected
Chloroform	0.86	4.2	Not Detected	Not Detected
1,1,1-Trichloroethane	0.86	4.7	Not Detected	Not Detected
Benzene	0.86	2.8	Not Detected	Not Detected
1,2-Dichloroethane	0.86	3.5	Not Detected	Not Detected
Trichloroethene	0.86	4.7	Not Detected	Not Detected
Tetrachloroethene	0.86	5.9	Not Detected	Not Detected
Chlorobenzene	0.86	4.0	Not Detected	Not Detected
alpha-Chlorotoluene	0.86	4.5	Not Detected	Not Detected
Acetone	3.4	8.2	4.0	9.7
Carbon Disulfide	3.4	11	Not Detected	Not Detected
trans-1,2-Dichloroethene	3.4	14	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.4	10	Not Detected	Not Detected
Bromodichloromethane	3.4	23	Not Detected	Not Detected
4-Methyl-2-pentanone	3.4	14	Not Detected	Not Detected
Bromoform	3.4	36	Not Detected	Not Detected
tert-Butylbenzene	3.4	19	Not Detected	Not Detected
Naphthalene	17	91	Not Detected	Not Detected
1,2-Dichlorobenzene	0.86	5.2	Not Detected	Not Detected
1,4-Dichlorobenzene	0.86	5.2	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	359-35-3	NA	Not Detected
Tetrafluoroethane	BLNK01	NA	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	93	70-130

AIR TOXICS LTD.

SAMPLE NAME: BK-Dist-Duplicate-1584

ID#: 0304003A-10A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d040110	Date of Collection:	3/29/03
Dil. Factor:	1.71	Date of Analysis:	4/1/03

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.86	2.2	Not Detected	Not Detected
Methylene Chloride	0.86	3.0	18	62
1,1-Dichloroethane	0.86	3.5	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.86	3.4	Not Detected	Not Detected
Chloroform	0.86	4.2	Not Detected	Not Detected
1,1,1-Trichloroethane	0.86	4.7	Not Detected	Not Detected
Benzene	0.86	2.8	Not Detected	Not Detected
1,2-Dichloroethane	0.86	3.5	Not Detected	Not Detected
Trichloroethene	0.86	4.7	Not Detected	Not Detected
Tetrachloroethene	0.86	5.9	Not Detected	Not Detected
Chlorobenzene	0.86	4.0	Not Detected	Not Detected
alpha-Chlorotoluene	0.86	4.5	Not Detected	Not Detected
Acetone	3.4	8.2	4.1	9.8
Carbon Disulfide	3.4	11	Not Detected	Not Detected
trans-1,2-Dichloroethene	3.4	14	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.4	10	Not Detected	Not Detected
Bromodichloromethane	3.4	23	Not Detected	Not Detected
4-Methyl-2-pentanone	3.4	14	Not Detected	Not Detected
Bromoform	3.4	36	Not Detected	Not Detected
tert-Butylbenzene	3.4	19	Not Detected	Not Detected
Naphthalene	17	91	Not Detected	Not Detected
1,2-Dichlorobenzene	0.86	5.2	Not Detected	Not Detected
1,4-Dichlorobenzene	0.86	5.2	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Tetrafluoroethane	359-35-3	NA	Not Detected
Tetrafluoroethane	BLNK01	NA	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	91	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0304003A-11A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d040107	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 4/1/03	

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.50	1.3	Not Detected	Not Detected
Methylene Chloride	0.50	1.8	Not Detected	Not Detected
1,1-Dichloroethane	0.50	2.0	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.50	2.0	Not Detected	Not Detected
Chloroform	0.50	2.5	Not Detected	Not Detected
1,1,1-Trichloroethane	0.50	2.8	Not Detected	Not Detected
Benzene	0.50	1.6	Not Detected	Not Detected
1,2-Dichloroethane	0.50	2.0	Not Detected	Not Detected
Trichloroethene	0.50	2.7	Not Detected	Not Detected
Tetrachloroethene	0.50	3.4	Not Detected	Not Detected
Chlorobenzene	0.50	2.3	Not Detected	Not Detected
alpha-Chlorotoluene	0.50	2.6	Not Detected	Not Detected
Acetone	2.0	4.8	Not Detected	Not Detected
Carbon Disulfide	2.0	6.3	Not Detected	Not Detected
trans-1,2-Dichloroethene	2.0	8.0	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	6.0	Not Detected	Not Detected
Bromodichloromethane	2.0	14	Not Detected	Not Detected
4-Methyl-2-pentanone	2.0	8.3	Not Detected	Not Detected
Bromoform	2.0	21	Not Detected	Not Detected
tert-Butylbenzene	2.0	11	Not Detected	Not Detected
Naphthalene	10	53	Not Detected	Not Detected
1,2-Dichlorobenzene	0.50	3.0	Not Detected	Not Detected
1,4-Dichlorobenzene	0.50	3.0	Not Detected	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	93	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0304003A-11B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	b040107	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 4/1/03	

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.50	1.3	Not Detected	Not Detected
Methylene Chloride	0.50	1.8	Not Detected	Not Detected
1,1-Dichloroethane	0.50	2.0	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.50	2.0	Not Detected	Not Detected
Chloroform	0.50	2.5	Not Detected	Not Detected
1,1,1-Trichloroethane	0.50	2.8	Not Detected	Not Detected
Benzene	0.50	1.6	Not Detected	Not Detected
1,2-Dichloroethane	0.50	2.0	Not Detected	Not Detected
Trichloroethene	0.50	2.7	Not Detected	Not Detected
Tetrachloroethene	0.50	3.4	Not Detected	Not Detected
Chlorobenzene	0.50	2.3	Not Detected	Not Detected
alpha-Chlorotoluene	0.50	2.6	Not Detected U J	Not Detected U J
Acetone	2.0	4.8	Not Detected	Not Detected
Carbon Disulfide	2.0	6.3	Not Detected	Not Detected
trans-1,2-Dichloroethene	2.0	8.0	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	6.0	Not Detected	Not Detected
Bromodichloromethane	2.0	14	Not Detected	Not Detected
4-Methyl-2-pentanone	2.0	8.3	Not Detected	Not Detected
Bromoform	2.0	21	Not Detected	Not Detected
tert-Butylbenzene	2.0	11	Not Detected	Not Detected
Naphthalene	10	53	Not Detected	Not Detected
1,2-Dichlorobenzene	0.50	3.0	Not Detected	Not Detected
1,4-Dichlorobenzene	0.50	3.0	Not Detected	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	83	70-130

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0304003A-12A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d040102	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 4/1/03	

Compound	%Recovery
Vinyl Chloride	85
Methylene Chloride	80
1,1-Dichloroethane	84
cis-1,2-Dichloroethene	85
Chloroform	85
1,1,1-Trichloroethane	89
Benzene	85
1,2-Dichloroethane	85
Trichloroethene	86
Tetrachloroethene	84
Chlorobenzene	84
alpha-Chlorotoluene	88
Acetone	90
Carbon Disulfide	88
trans-1,2-Dichloroethene	87
2-Butanone (Methyl Ethyl Ketone)	90
Bromodichloromethane	95
4-Methyl-2-pentanone	94
Bromoform	98
tert-Butylbenzene	110
Naphthalene	92
1,2-Dichlorobenzene	84
1,4-Dichlorobenzene	87

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	98	70-130

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0304003A-12B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	b040102	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 4/1/03	

Compound	%Recovery
Vinyl Chloride	104
Methylene Chloride	108
1,1-Dichloroethane	114
cis-1,2-Dichloroethene	115
Chloroform	111
1,1,1-Trichloroethane	111
Benzene	108
1,2-Dichloroethane	121
Trichloroethene	114
Tetrachloroethene	118
Chlorobenzene	105
alpha-Chlorotoluene	61 Q
Acetone	94
Carbon Disulfide	81
trans-1,2-Dichloroethene	81
2-Butanone (Methyl Ethyl Ketone)	100
Bromodichloromethane	92
4-Methyl-2-pentanone	106
Bromoform	84
tert-Butylbenzene	77
Naphthalene	90
1,2-Dichlorobenzene	70
1,4-Dichlorobenzene	74

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	85	70-130

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0304003A-13A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**d040103**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/1/03**	

Compound	%Recovery
Vinyl Chloride	90
Methylene Chloride	78
1,1-Dichloroethane	74
cis-1,2-Dichloroethene	84
Chloroform	81
1,1,1-Trichloroethane	83
Benzene	90
1,2-Dichloroethane	85
Trichloroethene	89
Tetrachloroethene	89
Chlorobenzene	85
alpha-Chlorotoluene	99
Acetone	84
Carbon Disulfide	85
trans-1,2-Dichloroethene	88
2-Butanone (Methyl Ethyl Ketone)	84
Bromodichloromethane	85
4-Methyl-2-pentanone	86
Bromoform	81
tert-Butylbenzene	Not Spiked
Naphthalene	Not Spiked
1,2-Dichlorobenzene	85
1,4-Dichlorobenzene	82

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	98	70-130

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0304003A-13B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**b040104**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/1/03**	

Compound	%Recovery
Vinyl Chloride	122
Methylene Chloride	109
1,1-Dichloroethane	104
cis-1,2-Dichloroethene	119
Chloroform	110
1,1,1-Trichloroethane	110
Benzene	117
1,2-Dichloroethane	126
Trichloroethene	122
Tetrachloroethene	129
Chlorobenzene	109
alpha-Chlorotoluene	68 Q
Acetone	88
Carbon Disulfide	80
trans-1,2-Dichloroethene	87
2-Butanone (Methyl Ethyl Ketone)	95
Bromodichloromethane	82
4-Methyl-2-pentanone	96
Bromoform	70
tert-Butylbenzene	Not Spiked
Naphthalene	Not Spiked
1,2-Dichlorobenzene	71
1,4-Dichlorobenzene	71

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	86	70-130

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Page ___ of ___

Contact Person: Gary Ritter
Company: TRC
Address: 5 Waterside Crossing City: Windsor State: CT Zip: 06095
Phone: 860-298-6250 FAX: 860-298-6380
Collected By: Signature: Dennis P. Ryder

Project Info:
P.O. #
Project #: 38182
Project Name: Solutia

Turn Around Time:
☐ Normal
☒ Rush ___ Specify

Lab ID	Field Sample I.D.	Date & Time	Analyses Requested	Start	Finish	Canister Pressure / Vacuum: Initial	Final	Receipt
01A	BBZ-office-9910	3/29/03	TO15	13:36	21:58	28.0	6.0	6.5"Hg
02A	BBZ-Intake-9584			13:30	21:53	30.0	11.0	6.0"Hg
03A	BBG-Office-9571			13:16	21:29	30.0	7.0	6.5"Hg
04A	BBG-Intake-96105			13:21	21:34	28.0	8.0	4.5"Hg
05A	CCB-office-TO1560			13:08	21:16	28.5	7.0	6.5"Hg
06A	CCB-Intake-14883			12:39	21:11	29.5	6.5	4.5"Hg
07A	BK-1st Fl. office-2489			12:08	20:16	22.5	5.1	6.5"Hg
08A	BK-Intake-33584			12:30	20:55	29.0	5.0	4.5"Hg
09A	BK-DIST-TO1627			12:19	20:32	29.0	7.0	6.5"Hg
10A	BK-DIST-Duplicate-1584			12:20	20:37	30.0	8.5	6.5"Hg

Relinquished By: (Signature) Date/Time: Dennis P Ryder 3/31/03
Received By: (Signature) Date/Time: 09:00
Relinquished By: (Signature) Date/Time:
Received By: (Signature) Date/Time: 4/1/03 930
Relinquished By: (Signature) Date/Time:
Received By: (Signature) Date/Time:

Notes:

Lab Use Only	Shipper Name	Air Bill #	Opened By	Temp. (°C)	Condition	Custody Seals Intact?	Work Order #
	FedEx	802462232244	CA		Good	Yes No (None)	0304003

TO-13

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- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

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E-mail to:samplereceiving@airtoxics.com

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WORK ORDER #: 0304039R1

Work Order Summary

CLIENT:	Mr. Gary Ritter TRC Environmental Corporation 5 Waterside Crossing Windsor, CT 06095	**BILL TO:**	Mr. Gary Ritter TRC Environmental Corporation 5 Waterside Crossing Windsor, CT 06095
PHONE:	860-298-6300	**P.O. #**	
FAX:		**PROJECT #**	38182 Solutia/Sauget
DATE RECEIVED:	4/2/03	**CONTACT:**	Betty Chu
DATE COMPLETED:	4/14/03		
DATE REISSUED:	4/15/01		

FRACTION #	NAME	TEST
01A	SVP-1-SG-040103	Modified TO-13A/TIC
01AA	SVP-1-SG-040103 Duplicate	Modified TO-13A/TIC
02A	SVP-2-SG-040103	Modified TO-13A/TIC
03A	SVP-3-SG-040103	Modified TO-13A/TIC
04A	SVP-4-SG-040103	Modified TO-13A/TIC
05A	SVP-5-SG-040103	Modified TO-13A/TIC
06A	SVP-14-SG-040103	Modified TO-13A/TIC
07A	SVP-17-SG-040103	Modified TO-13A/TIC
08A	SVP-140-SG-040103	Modified TO-13A/TIC
09A	Background Air Sample 040103-AM	Modified TO-13A/TIC
10A	Background Air Sample 040103-PM	Modified TO-13A/TIC
11A	Trip Blank 040103	Modified TO-13A/TIC
12A	Lab Blank	Modified TO-13A/TIC
13A	LCS	Modified TO-13A/TIC

CERTIFIED BY: Linda A. Freeman DATE: 04/15/03

Laboratory Director

Certfication numbers: AR DEQ, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/02, Expiration date: 06/30/03
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
Modified TO-13A
TRC Environmental Corporation
Workorder# 0304039R1

Eleven XAD VOST Tube samples were received on April 02, 2003. The laboratory performed the analysis via Modified EPA Method TO-13A using GC/MS in the full scan mode. The soxhlet extraction and extract concentration to 1.0mL were performed via modified method 3540. See the data sheets for the reporting limits for each compound. Duplicate extraction cannot be performed on PUF/XAD2 media, therefore duplicate results are derived from analyzing the extract twice.

Requirement	*TO-13A*	*ATL Modifications*
Extraction Solvent	Use of PUF only requires use of 10% ether in hexane; separate extraction of filter in DCM. Use of XAD only requires use of DCM; extract filter with XAD.	Use PUF/XAD-2 cartridge; extract cartridge + filter together in DCM.
Glassware Cleaning	Cleaning series consisting of rinsing glassware with last solvent, acetone, hexane, water/detergent, DI H2O, muffle furnace @400 deg for 4 hrs.	Pre-soak in a 5 % Chem-Solv solution at least once per week, a water/detergent wash, soaking in tap water for at least 1 hr, and a DI H2O rinse. Glassware is then set to dry or rinsed with Methanol. Glassware is pre-rinsed with DCM prior to use.
Extract Cleanup	Elute extract through silica gel prior to analysis.	No clean up used, experience shows that step does not improve method performance for typical air samples.
Surrogate Concentration	1.0 ug final concentration.	50 ug final concentration for full scan, 2.0 ug for SIM.
Standard Preparation	Standards prepared in Hexane.	Standards prepared in Methylene Chloride.
Surrogate Recovery Limit	60 - 120%	50-150% for (non-PAH) surrogates that are not included in TO-13A
Sampling Volume	TO-13	Sampling volume was supplied by the client. A sample volume of 1.0 m3 was assumed for all QC samples.

Receiving Notes

Samples were not wrapped in aluminum foil and therefore came in contact with plastic shipping bags. The client was notified via the Login email that contact with plastic may cause contamination unrelated to the actual sampling event. ATL proceeded with the analysis.

Analytical Notes

There were no analytical discrepancies.

Specific analytes that are requested by the client to be reported as tentatively identified compounds (TICs) are determined by searching for each compound's characteristic spectra. If no chromatographic peak

displaying the compound specific spectra exists, then the TIC is reported as not detected. Please note that the laboratory has not evaluated the stability of any heretofore tentatively identified compound in the vapor phase or for efficiency of recovery through the analytical system.

The client requested an abbreviated target analyte list. The associated LCS's were spiked with representative compounds as per the method.

THE WORKORDER WAS REISSUED ON 04/15/03 TO REPORT THE DUPLICATE ANALYSIS OF SAMPLE SVP-1-SG-040103 AND AMEND THE SURROGATE METHOD LIMITS FOR THE LCS.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:
E - Exceeds instrument calibration range.
Q - Exceeds quality control limits.
S - Saturated peak.
J - Estimated value.
B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).
U - Compound analyzed for but not detected above the reporting limit.
N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:
a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: SVP-1-SG-040103

ID#: 0304039R1-01A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	k040922	Date of Collection:	4/1/03
Dil. Factor:	1.00	Date of Analysis:	4/9/03
		Date of Extraction:	4/4/03

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	86	50-150
Phenol-d5	89	50-150
Nitrobenzene-d5	84	50-150
2-Fluorobiphenyl	83	60-120
2,4,6-Tribromophenol	92	50-150
Terphenyl-d14	91	60-120

AIR TOXICS LTD.

SAMPLE NAME: SVP-1-SG-040103 Duplicate

ID#: 0304039R1-01AA

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	k040923	Date of Collection:	4/1/03
Dil. Factor:	1.00	Date of Analysis:	4/9/03
		Date of Extraction:	4/4/03

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	86	50-150
Phenol-d5	91	50-150
Nitrobenzene-d5	84	50-150
2-Fluorobiphenyl	82	60-120
2,4,6-Tribromophenol	91	50-150
Terphenyl-d14	92	60-120

AIR TOXICS LTD.

SAMPLE NAME: SVP-2-SG-040103

ID#: 0304039R1-02A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	k040924	Date of Collection:	4/1/03
Dil. Factor:	1.00	Date of Analysis:	4/9/03
		Date of Extraction:	4/4/03

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	72	50-150
Phenol-d5	79	50-150
Nitrobenzene-d5	70	50-150
2-Fluorobiphenyl	73	60-120
2,4,6-Tribromophenol	85	50-150
Terphenyl-d14	85	60-120

AIR TOXICS LTD.

SAMPLE NAME: SVP-3-SG-040103

ID#: 0304039R1-03A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	k040925	Date of Collection:	4/1/03
Dil. Factor:	1.00	Date of Analysis:	4/9/03
		Date of Extraction:	4/4/03

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	89	50-150
Phenol-d5	96	50-150
Nitrobenzene-d5	87	50-150
2-Fluorobiphenyl	83	60-120
2,4,6-Tribromophenol	97	50-150
Terphenyl-d14	96	60-120

AIR TOXICS LTD.

SAMPLE NAME: SVP-4-SG-040103

ID#: 0304039R1-04A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	k040926	Date of Collection:	4/1/03
Dil. Factor:	1.00	Date of Analysis:	4/10/03
		Date of Extraction:	4/4/03

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	82	50-150
Phenol-d5	87	50-150
Nitrobenzene-d5	78	50-150
2-Fluorobiphenyl	79	60-120
2,4,6-Tribromophenol	85	50-150
Terphenyl-d14	88	60-120

AIR TOXICS LTD.

SAMPLE NAME: SVP-5-SG-040103

ID#: 0304039R1-05A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	k040927	Date of Collection:	4/1/03
Dil. Factor:	1.00	Date of Analysis:	4/10/03
		Date of Extraction:	4/4/03

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	88	50-150
Phenol-d5	93	50-150
Nitrobenzene-d5	88	50-150
2-Fluorobiphenyl	87	60-120
2,4,6-Tribromophenol	95	50-150
Terphenyl-d14	96	60-120

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SAMPLE NAME: SVP-14-SG-040103

ID#: 0304039R1-06A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	k040928	Date of Collection:	4/1/03
Dil. Factor:	1.00	Date of Analysis:	4/10/03
		Date of Extraction:	4/4/03

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	8.6

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	104	50-150
Phenol-d5	97	50-150
Nitrobenzene-d5	96	50-150
2-Fluorobiphenyl	92	60-120
2,4,6-Tribromophenol	94	50-150
Terphenyl-d14	99	60-120

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SAMPLE NAME: SVP-17-SG-040103

ID#: 0304039R1-07A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	k040929r1	Date of Collection:	4/1/03
Dil. Factor:	1.00	Date of Analysis:	4/10/03
		Date of Extraction:	4/4/03

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	70	50-150
Phenol-d5	76	50-150
Nitrobenzene-d5	68	50-150
2-Fluorobiphenyl	71	60-120
2,4,6-Tribromophenol	77	50-150
Terphenyl-d14	82	60-120

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SAMPLE NAME: SVP-140-SG-040103

ID#: 0304039R1-08A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	k040930	Date of Collection:	4/1/03
Dil. Factor:	1.00	Date of Analysis:	4/10/03
		Date of Extraction:	4/4/03

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	6.4

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	103	50-150
Phenol-d5	101	50-150
Nitrobenzene-d5	98	50-150
2-Fluorobiphenyl	91	60-120
2,4,6-Tribromophenol	104	50-150
Terphenyl-d14	100	60-120

AIR TOXICS LTD.

SAMPLE NAME: Background Air Sample 040103-AM

ID#: 0304039R1-09A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	k040931	Date of Collection:	4/1/03
Dil. Factor:	1.00	Date of Analysis:	4/10/03
		Date of Extraction:	4/4/03

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	85	50-150
Phenol-d5	93	50-150
Nitrobenzene-d5	86	50-150
2-Fluorobiphenyl	84	60-120
2,4,6-Tribromophenol	95	50-150
Terphenyl-d14	91	60-120

AIR TOXICS LTD.

SAMPLE NAME: Background Air Sample 040103-PM

ID#: 0304039R1-10A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	**k040932**	**Date of Collection:**	**4/1/03**
Dil. Factor:	**1.00**	**Date of Analysis:**	**4/10/03**
		Date of Extraction:	**4/4/03**

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	74	50-150
Phenol-d5	80	50-150
Nitrobenzene-d5	75	50-150
2-Fluorobiphenyl	74	60-120
2,4,6-Tribromophenol	81	50-150
Terphenyl-d14	84	60-120

AIR TOXICS LTD.

SAMPLE NAME: Trip Blank 040103

ID#: 0304039R1-11A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	k041004	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 4/10/03	
		Date of Extraction: 4/4/03	

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	83	50-150
Phenol-d5	87	50-150
Nitrobenzene-d5	83	50-150
2-Fluorobiphenyl	80	60-120
2,4,6-Tribromophenol	86	50-150
Terphenyl-d14	92	60-120

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0304039R1-12A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	k040920	**Date of Collection:**	NA
Dil. Factor:	1.00	**Date of Analysis:**	4/9/03
		Date of Extraction:	4/4/03

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
2-Fluorophenol	74	50-150
Phenol-d5	79	50-150
Nitrobenzene-d5	75	50-150
2-Fluorobiphenyl	71	60-120
2,4,6-Tribromophenol	81	50-150
Terphenyl-d14	82	60-120

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0304039R1-13A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	k040921	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 4/9/03	
		Date of Extraction: 4/4/03	

Compound	%Recovery
Phenol	64
2-Chlorophenol	66
1,4-Dichlorobenzene	64
N-Nitroso-di-n-propylamine	72
1,2,4-Trichlorobenzene	67
4-Chloro-3-methylphenol	76
Acenaphthene	68
4-Nitrophenol	61
2,4-Dinitrotoluene	68
Pentachlorophenol	61
Pyrene	70

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
2-Fluorophenol	60	50-150
Phenol-d5	63	50-150
Nitrobenzene-d5	66	50-150
2-Fluorobiphenyl	66	60-120
2,4,6-Tribromophenol	79	50-150
Terphenyl-d14	75	60-120

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CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice
Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action of any kind related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX: (916) 985-1020

Contact Person: MIKE SUSCA
Company: TRC ENVIRONMENTAL
Address: 5 WINDSOR CROSSING City: WINDSOR State: CT Zip: 06095
Phone: (860) 298-6234 FAX: (860) 298-6399
Collected By: Signature: Kati Laurent

Project Info:
P.O. #
Project # 38182
Project Name: Scuba/Secret

Turn Around Time:
☐ Normal
☒ Rush SEE NOTES
Specify

Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested	Canister Pressure / Vacuum Start / Finish	Initial	Final	Receipt
01A	SVP-1-SG-040103	4/1/03 1604	TO-13	150.4 / 150.7	1849	1604	135
02A	SVP-2-SG-040103	4/1/03 1350	TO-13	150.5 ~ 153.9	1135	1350	135
03A	SVP-3-SG-040103	4/1/03 1401	TO-13	150.0 ~ 157.7	1146	1401	135
04A	SVP-4-SG-040103	4/1/03 1400	TO-13	149.2 - 155.9	1145	1400	135
05A	SVP-5-SG-040103	4/1/03 1141	TO-13	149.5 ~ 151.2	0926	1141	135
06A	SVP-14-SG-040103	4/1/03 1349	TO-13	75.29 - ~~75.04~~ (LC) 76.71	0919	1349	270
07A	SVP-17-SG-040103	4/1/03 1207	TO-13	149.1 ~ 151.9	0952	1207	135
08A	SVP-14D-SG-040103	4/1/03 1349	TO-13	75.09 ~ 76.20	0919	1349	270
09A	Background Air Sample 040103-AM	4/1/03 1124	TO-13	149.2 ~ 155.9	0909	1124	135
10A	Background Air Sample 040103-PM	4/1/03 1501	TO-13	149.1 ~ 151.9	1246	1501	135

Relinquished By: (Signature) Date/Time: Kati Laurent 4/1/03 1445
Received By: (Signature) Date/Time: Howard Thomas ATL 4/2/03 9:15
Relinquished By: (Signature) Date/Time:
Received By: (Signature) Date/Time:

Notes:
48 hr. TAT on analysis
Standard TAT on report (include data validation package).

Lab Use Only	Shipper Name	Air Bill #	Opened By	Temp. (°C)	Condition	Custody Seals Intact?	Work Order #
	FedEx	8391 4836 9958		3.4	Good	Yes / No / None	0304039

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CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice

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180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX: (916) 985-1020

Contact Person: Mike Sisca
Company: TRC Environmental
Address: 5 Waterside Crossing City: Windsor State: CT Zip: 06095
Phone: (860) 298-6234 FAX: (860) 298-6399
Collected By: Signature: Katt Cannot

Project info:
P.O. #
Project #: 39182
Project Name: Solutia/Sauget

Turn Around Time:
☐ Normal
☒ Rush: SEE NOTES (Specify)

Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested	Canister Pressure / Vacuum Initial	Final	Receipt
11A	Trip Blank 040103	4/1/03 ~1415	TO-13 refer to analyte list previously submitted	—	—	

Relinquished By: (Signature) Date/Time	Received By: (Signature) Date/Time
Katt Cannot 4/1/03 1445	Laura D. Thomas AAC 4/2/03 9:15
Relinquished By: (Signature) Date/Time	Received By: (Signature) Date/Time
Relinquished By: (Signature) Date/Time	Received By: (Signature) Date/Time

Notes:
48 hr TAT on analysis
Standard TAT on report (include data validation package).

Lab Use Only

Shipper Name	Air Bill #	Opened By:	Temp. (°C)	Condition	Custody Seals Intact?	Work Order #
FedEx	8397 4836 9393	JJ	3.4	Good	(Yes) No None	0304039

AIR TOXICS LTD.

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Air Toxics Ltd. Introduces the Electronic Report

Thank you for choosing Air Toxics Ltd. To better serve our customers, we are providing your report by e-mail. This document is provided in Portable Document Format which can be viewed with Acrobat Reader by Adobe.

This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

(916) 985-1000 .FAX (916) 985-1020
Hours 8:00 A.M to 6:00 P.M. Pacific
E-mail to:samplereceiving@airtoxics.com

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AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0304006

Work Order Summary

CLIENT:	Mr. Gary Ritter TRC Environmental Corporation 5 Waterside Crossing Windsor, CT 06095	**BILL TO:**	Mr. Gary Ritter TRC Environmental Corporation 5 Waterside Crossing Windsor, CT 06095
PHONE:	860-298-6300	**P.O. #**	
FAX:		**PROJECT #**	38182 Solutia/Sauget
DATE RECEIVED:	4/1/03	**CONTACT:**	Betty Chu
DATE COMPLETED:	4/14/03		

FRACTION #	NAME	TEST
01A	SVP-16-SG-033103	Modified TO-13A/TIC
02A	SVP-12-SG-033103	Modified TO-13A/TIC
03A	SVP-15-SG-033103	Modified TO-13A/TIC
04A	SVP-8-SG-033103	Modified TO-13A/TIC
05A	SVP-11-SG-033103	Modified TO-13A/TIC
06A	SVP-10-SG-033103	Modified TO-13A/TIC
07A	SVP-100-SG-033103	Modified TO-13A/TIC
08A	SVP-6-SG-033103	Modified TO-13A/TIC
09A	SVP-9-SG-033103	Modified TO-13A/TIC
09AA	SVP-9-SG-033103 Duplicate	Modified TO-13A/TIC
10A	Background Sample 033103	Modified TO-13A/TIC
11A	BBZ-Office-01	Modified TO-13A/TIC
12A	BBZ-Intake-02	Modified TO-13A/TIC
13A	BBG-Office-03	Modified TO-13A/TIC
14A	BBG-Intake-04	Modified TO-13A/TIC
15A	CCB-Office-05	Modified TO-13A/TIC
16A	CCB-Intake-06	Modified TO-13A/TIC
17A	BK-1st Fl. Office-07	Modified TO-13A/TIC
18A	BK-Intake-08	Modified TO-13A/TIC
18AA	BK-Intake-08 Duplicate	Modified TO-13A/TIC

Continued on next page

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AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0304006

Work Order Summary

CLIENT:	Mr. Gary Ritter TRC Environmental Corporation 5 Waterside Crossing Windsor, CT 06095	**BILL TO:**	Mr. Gary Ritter TRC Environmental Corporation 5 Waterside Crossing Windsor, CT 06095
PHONE:	860-298-6300	**P.O. #**	
FAX:		**PROJECT #**	38182 Solutia/Sauget
DATE RECEIVED:	4/1/03	**CONTACT:**	Betty Chu
DATE COMPLETED:	4/14/03		

FRACTION #	NAME	TEST
19A	BK-Dist-09	Modified TO-13A/TIC
20A	BK-Dist-Duplicate-10	Modified TO-13A/TIC
21A	Blank-11	Modified TO-13A/TIC
22A	Trip Blank 033103	Modified TO-13A/TIC
23A	Lab Blank	Modified TO-13A/TIC
23B	Lab Blank	Modified TO-13A/TIC
24A	LCS	Modified TO-13A/TIC
24B	LCS	Modified TO-13A/TIC

CERTIFIED BY: Linda S. Frumarx DATE: 04/14/03

Laboratory Director

Certfication numbers: AR DEQ, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/02, Expiration date: 06/30/03
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified TO-13
TRC Environmental Corporation
Workorder# 0304006

Twenty Two VOST XAD Tube samples were received on April 01, 2003. The laboratory performed the analysis via Modified EPA Method TO-13 using GC/MS in the full scan mode. The soxhlet extraction and extract concentration to 1.0mL were performed via modified method 3540. See the data sheets for the reporting limits for each compound. Duplicate extraction cannot be performed on VOST XAD Tube media, therefore duplicate results are derived from analyzing the extract twice.

Requirement	*TO-13A*	*ATL Modifications*
Extraction Solvent	Use of PUF only requires use of 10% ether in hexane; separate extraction of filter in DCM. Use of XAD only requires use of DCM; extract filter with XAD.	Use PUF/XAD-2 cartridge; extract cartridge + filter together in DCM.
Glassware Cleaning	Cleaning series consisting of rinsing glassware with last solvent, acetone, hexane, water/detergent, DI H2O, muffle furnace @400 deg for 4 hrs.	Pre-soak in a 5 % Chem-Solv solution at least once per week, a water/detergent wash, soaking in tap water for at least 1 hr, and a DI H2O rinse. Glassware is then set to dry or rinsed with Methanol. Glassware is pre-rinsed with DCM prior to use.
Extract Cleanup	Elute extract through silica gel prior to analysis.	No clean up used, experience shows that step does not improve method performance for typical air samples.
Surrogate Concentration	1.0 ug final concentration.	50 ug final concentration for full scan, 2.0 ug for SIM.
Standard Preparation	Standards prepared in Hexane.	Standards prepared in Methylene Chloride.
Surrogate Recovery Limit	60 - 120%	50-150% for (non-PAH) surrogates that are not included in TO-13A
Sampling Volume	TO-13	Sampling volume was supplied by the client. A sample volume of 1.0 m3 was assumed for all QC samples.

Receiving Notes

The chain of custody information for samples SVP-11-033103 and SVP-6-033103 did not match the entries on the sample tags. The discrepancy was noted in the Login email and the information on the chain of custody was used to process and report the samples.

VOST XAD Tube samples were not wrapped in aluminum foil and therefore came in contact with plastic shipping bags. The client was notified via the Login email that contact with plastic may cause contamination unrelated to the actual sampling event. ATL proceeded with the analysis.

A Temperature Blank was not included with the shipment. Temperature was measured on a representative sample and was not within 4 degrees C. +/- 2 degrees. Coolant in the form of ice/blue ice was not present.

The client was notified via the login fax/email and the analysis proceeded.

Analytical Notes

Specific analytes that are requested by the client to be reported as tentatively identified compounds (TICs) are determined by searching for each compound's characteristic spectra. If no chromatographic peak displaying the compound specific spectra exists, then the TIC is reported as not detected. Please note that the laboratory has not evaluated the stability of any heretofore tentatively identified compound in the vapor phase or for efficiency of recovery through the analytical system.

The recovery of internal standard 1,4-Dichlorobenzene-d4 in samples SVP-10-SG-033103 and SVP-100-SG-033103 was outside control limits due to matrix interferences. Dilution of the samples was required to meet method acceptance limits.

The client requested an abbreviated target analyte list. The associated LCS's were spiked with representative compounds as per the method.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:
E - Exceeds instrument calibration range.
Q - Exceeds quality control limits.
S - Saturated peak.
J - Estimated value.
B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).
U - Compound analyzed for but not detected above the reporting limit.
N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:
a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: SVP-16-SG-033103

ID#: 0304006-01A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	y040406	Date of Collection:	3/31/03
Dil. Factor:	1.00	Date of Analysis:	4/4/03
		Date of Extraction:	4/1/03

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	73	50-150
Phenol-d5	78	50-150
Nitrobenzene-d5	74	50-150
2-Fluorobiphenyl	72	60-120
2,4,6-Tribromophenol	80	50-150
Terphenyl-d14	80	60-120

AIR TOXICS LTD.

SAMPLE NAME: SVP-12-SG-033103

ID#: 0304006-02A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	**y040407**	**Date of Collection:**	**3/31/03**
Dil. Factor:	**1.00**	**Date of Analysis:**	**4/4/03**
		Date of Extraction:	**4/1/03**

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	*100-00-5*	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	76	50-150
Phenol-d5	81	50-150
Nitrobenzene-d5	76	50-150
2-Fluorobiphenyl	77	60-120
2,4,6-Tribromophenol	81	50-150
Terphenyl-d14	78	60-120

AIR TOXICS LTD.

SAMPLE NAME: SVP-15-SG-033103

ID#: 0304006-03A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	y040408	Date of Collection:	3/31/03
Dil. Factor:	1.00	Date of Analysis:	4/4/03
		Date of Extraction:	4/1/03

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	76	50-150
Phenol-d5	79	50-150
Nitrobenzene-d5	74	50-150
2-Fluorobiphenyl	73	60-120
2,4,6-Tribromophenol	79	50-150
Terphenyl-d14	83	60-120

AIR TOXICS LTD.

SAMPLE NAME: SVP-8-SG-033103

ID#: 0304006-04A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	**y040409**	**Date of Collection: 3/31/03**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/4/03**	
		Date of Extraction: 4/1/03	

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	79	50-150
Phenol-d5	83	50-150
Nitrobenzene-d5	78	50-150
2-Fluorobiphenyl	76	60-120
2,4,6-Tribromophenol	77	50-150
Terphenyl-d14	77	60-120

AIR TOXICS LTD.

SAMPLE NAME: SVP-11-SG-033103

ID#: 0304006-05A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	y040410	Date of Collection:	3/31/03
Dil. Factor:	1.00	Date of Analysis:	4/4/03
		Date of Extraction:	4/1/03

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	81	50-150
Phenol-d5	86	50-150
Nitrobenzene-d5	79	50-150
2-Fluorobiphenyl	78	60-120
2,4,6-Tribromophenol	87	50-150
Terphenyl-d14	85	60-120

AIR TOXICS LTD.

SAMPLE NAME: SVP-10-SG-033103

ID#: 0304006-06A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	**y040710**	**Date of Collection:**	**3/31/03**
Dil. Factor:	**2.00**	**Date of Analysis:**	**4/7/03**
		Date of Extraction:	**4/1/03**

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	10	Not Detected
2-Chlorophenol	10	Not Detected
Nitrobenzene	2.0	Not Detected
2,4-Dichlorophenol	10	Not Detected
2,4,5-Trichlorophenol	10	Not Detected
2,4,6-Trichlorophenol	10	Not Detected
4-Chloroaniline	20	Not Detected
Pentachlorophenol	40	Not Detected
Aniline	2.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	59	50-150
Phenol-d5	63	50-150
Nitrobenzene-d5	83	50-150
2-Fluorobiphenyl	86	60-120
2,4,6-Tribromophenol	94	50-150
Terphenyl-d14	96	60-120

AIR TOXICS LTD.

SAMPLE NAME: SVP-100-SG-033103

ID#: 0304006-07A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	**y040711**	**Date of Collection: 3/31/03**	
Dil. Factor:	**2.00**	**Date of Analysis: 4/7/03**	
		Date of Extraction: 4/1/03	

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	10	Not Detected
2-Chlorophenol	10	Not Detected
Nitrobenzene	2.0	Not Detected
2,4-Dichlorophenol	10	Not Detected
2,4,5-Trichlorophenol	10	Not Detected
2,4,6-Trichlorophenol	10	Not Detected
4-Chloroaniline	20	Not Detected
Pentachlorophenol	40	Not Detected
Aniline	2.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	55	50-150
Phenol-d5	60	50-150
Nitrobenzene-d5	76	50-150
2-Fluorobiphenyl	83	60-120
2,4,6-Tribromophenol	87	50-150
Terphenyl-d14	97	60-120

AIR TOXICS LTD.

SAMPLE NAME: SVP-6-SG-033103

ID#: 0304006-08A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	y040413	Date of Collection:	3/31/03
Dil. Factor:	1.00	Date of Analysis:	4/4/03
		Date of Extraction:	4/1/03

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	70	50-150
Phenol-d5	76	50-150
Nitrobenzene-d5	69	50-150
2-Fluorobiphenyl	71	60-120
2,4,6-Tribromophenol	80	50-150
Terphenyl-d14	81	60-120

AIR TOXICS LTD.

SAMPLE NAME: SVP-9-SG-033103

ID#: 0304006-09A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	y040414	Date of Collection:	3/31/03
Dil. Factor:	1.00	Date of Analysis:	4/4/03
		Date of Extraction:	4/1/03

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	80	50-150
Phenol-d5	83	50-150
Nitrobenzene-d5	74	50-150
2-Fluorobiphenyl	77	60-120
2,4,6-Tribromophenol	88	50-150
Terphenyl-d14	85	60-120

AIR TOXICS LTD.

SAMPLE NAME: SVP-9-SG-033103 Duplicate

ID#: 0304006-09AA

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	y040415	Date of Collection:	3/31/03
Dil. Factor:	1.00	Date of Analysis:	4/5/03
		Date of Extraction:	4/1/03

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	77	50-150
Phenol-d5	82	50-150
Nitrobenzene-d5	76	50-150
2-Fluorobiphenyl	76	60-120
2,4,6-Tribromophenol	91	50-150
Terphenyl-d14	85	60-120

AIR TOXICS LTD.

SAMPLE NAME: Background Sample 033103

ID#: 0304006-10A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	y040416	Date of Collection:	3/31/03
Dil. Factor:	1.00	Date of Analysis:	4/5/03
		Date of Extraction:	4/1/03

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	66	50-150
Phenol-d5	69	50-150
Nitrobenzene-d5	61	50-150
2-Fluorobiphenyl	65	60-120
2,4,6-Tribromophenol	72	50-150
Terphenyl-d14	70	60-120

AIR TOXICS LTD.

SAMPLE NAME: BBZ-Office-01

ID#: 0304006-11A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	y040417	Date of Collection:	3/29/03
Dil. Factor:	1.00	Date of Analysis:	4/5/03
		Date of Extraction:	4/1/03

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	71	50-150
Phenol-d5	75	50-150
Nitrobenzene-d5	69	50-150
2-Fluorobiphenyl	71	60-120
2,4,6-Tribromophenol	82	50-150
Terphenyl-d14	79	60-120

AIR TOXICS LTD.

SAMPLE NAME: BBZ-Intake-02

ID#: 0304006-12A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	y040717	Date of Collection:	3/29/03
Dil. Factor:	1.00	Date of Analysis:	4/7/03
		Date of Extraction:	4/1/03

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	82	50-150
Phenol-d5	87	50-150
Nitrobenzene-d5	81	50-150
2-Fluorobiphenyl	80	60-120
2,4,6-Tribromophenol	98	50-150
Terphenyl-d14	91	60-120

AIR TOXICS LTD.

SAMPLE NAME: BBG-Office-03

ID#: 0304006-13A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	y040718	**Date of Collection:**	3/29/03
Dil. Factor:	1.00	**Date of Analysis:**	4/7/03
		Date of Extraction:	4/1/03

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	84	50-150
Phenol-d5	89	50-150
Nitrobenzene-d5	85	50-150
2-Fluorobiphenyl	85	60-120
2,4,6-Tribromophenol	101	50-150
Terphenyl-d14	90	60-120

AIR TOXICS LTD.

SAMPLE NAME: BBG-Intake-04

ID#: 0304006-14A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	y040719	Date of Collection:	3/29/03
Dil. Factor:	1.00	Date of Analysis:	4/7/03
		Date of Extraction:	4/1/03

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	66	50-150
Phenol-d5	70	50-150
Nitrobenzene-d5	65	50-150
2-Fluorobiphenyl	68	60-120
2,4,6-Tribromophenol	90	50-150
Terphenyl-d14	87	60-120

AIR TOXICS LTD.

SAMPLE NAME: CCB-Office-05

ID#: 0304006-15A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	**y040720**	**Date of Collection:**	**3/29/03**
Dil. Factor:	**1.00**	**Date of Analysis:**	**4/7/03**
		Date of Extraction:	**4/1/03**

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	82	50-150
Phenol-d5	85	50-150
Nitrobenzene-d5	80	50-150
2-Fluorobiphenyl	81	60-120
2,4,6-Tribromophenol	96	50-150
Terphenyl-d14	89	60-120

AIR TOXICS LTD.

SAMPLE NAME: CCB-Intake-06

ID#: 0304006-16A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	**y040721**	**Date of Collection:**	**3/29/03**
Dil. Factor:	**1.00**	**Date of Analysis:**	**4/7/03**
		Date of Extraction:	**4/1/03**

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	76	50-150
Phenol-d5	80	50-150
Nitrobenzene-d5	75	50-150
2-Fluorobiphenyl	75	60-120
2,4,6-Tribromophenol	99	50-150
Terphenyl-d14	91	60-120

AIR TOXICS LTD.

SAMPLE NAME: BK-1st Fl. Office-07

ID#: 0304006-17A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	**y040722**	**Date of Collection:**	**3/29/03**
Dil. Factor:	**1.00**	**Date of Analysis:**	**4/7/03**
		Date of Extraction:	**4/1/03**

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	78	50-150
Phenol-d5	82	50-150
Nitrobenzene-d5	76	50-150
2-Fluorobiphenyl	77	60-120
2,4,6-Tribromophenol	99	50-150
Terphenyl-d14	88	60-120

AIR TOXICS LTD.

SAMPLE NAME: BK-Intake-08

ID#: 0304006-18A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	y040723	Date of Collection:	3/29/03
Dil. Factor:	1.00	Date of Analysis:	4/7/03
		Date of Extraction:	4/1/03

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	80	50-150
Phenol-d5	85	50-150
Nitrobenzene-d5	81	50-150
2-Fluorobiphenyl	79	60-120
2,4,6-Tribromophenol	99	50-150
Terphenyl-d14	93	60-120

AIR TOXICS LTD.

SAMPLE NAME: BK-Intake-08 Duplicate

ID#: 0304006-18AA

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	y040724	Date of Collection:	3/29/03
Dil. Factor:	1.00	Date of Analysis:	4/7/03
		Date of Extraction:	4/1/03

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	81	50-150
Phenol-d5	85	50-150
Nitrobenzene-d5	80	50-150
2-Fluorobiphenyl	79	60-120
2,4,6-Tribromophenol	99	50-150
Terphenyl-d14	91	60-120

AIR TOXICS LTD.

SAMPLE NAME: BK-Dist-09

ID#: 0304006-19A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	k040808	Date of Collection:	3/29/03
Dil. Factor:	1.00	Date of Analysis:	4/8/03
		Date of Extraction:	4/1/03

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	64	50-150
Phenol-d5	66	50-150
Nitrobenzene-d5	61	50-150
2-Fluorobiphenyl	69	60-120
2,4,6-Tribromophenol	82	50-150
Terphenyl-d14	94	60-120

AIR TOXICS LTD.

SAMPLE NAME: BK-Dist-Duplicate-10

ID#: 0304006-20A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	k040809	Date of Collection:	3/29/03
Dil. Factor:	1.00	Date of Analysis:	4/8/03
		Date of Extraction:	4/1/03

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	53	50-150
Phenol-d5	63	50-150
Nitrobenzene-d5	52	50-150
2-Fluorobiphenyl	64	60-120
2,4,6-Tribromophenol	77	50-150
Terphenyl-d14	87	60-120

AIR TOXICS LTD.

SAMPLE NAME: Blank-11

ID#: 0304006-21A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	k040810	Date of Collection:	3/29/03
Dil. Factor:	1.00	Date of Analysis:	4/8/03
		Date of Extraction:	4/1/03

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	71	50-150
Phenol-d5	74	50-150
Nitrobenzene-d5	68	50-150
2-Fluorobiphenyl	73	60-120
2,4,6-Tribromophenol	83	50-150
Terphenyl-d14	91	60-120

AIR TOXICS LTD.

SAMPLE NAME: Trip Blank 033103

ID#: 0304006-22A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	**k040811**	**Date of Collection: 3/31/03**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/8/03**	
		Date of Extraction: 4/1/03	

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	70	50-150
Phenol-d5	75	50-150
Nitrobenzene-d5	69	50-150
2-Fluorobiphenyl	77	60-120
2,4,6-Tribromophenol	80	50-150
Terphenyl-d14	92	60-120

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0304006-23A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	y040404	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 4/4/03	
		Date of Extraction: 4/1/03	

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
2-Fluorophenol	77	50-150
Phenol-d5	78	50-150
Nitrobenzene-d5	74	50-150
2-Fluorobiphenyl	72	60-120
2,4,6-Tribromophenol	67	50-150
Terphenyl-d14	74	60-120

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0304006-23B

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	k040806	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	4/8/03
		Date of Extraction:	4/1/03

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
2-Fluorophenol	80	50-150
Phenol-d5	84	50-150
Nitrobenzene-d5	79	50-150
2-Fluorobiphenyl	79	60-120
2,4,6-Tribromophenol	80	50-150
Terphenyl-d14	93	60-120

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0304006-24A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	y040405	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 4/4/03	
		Date of Extraction: 4/1/03	

Compound	%Recovery
Phenol	74
2-Chlorophenol	75
1,4-Dichlorobenzene	70
N-Nitroso-di-n-propylamine	70
1,2,4-Trichlorobenzene	75
4-Chloro-3-methylphenol	78
Acenaphthene	75
4-Nitrophenol	65
2,4-Dinitrotoluene	68
Pentachlorophenol	61
Pyrene	75

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
2-Fluorophenol	70	50-150
Phenol-d5	73	50-150
Nitrobenzene-d5	77	50-150
2-Fluorobiphenyl	77	60-120
2,4,6-Tribromophenol	79	50-150
Terphenyl-d14	77	60-120

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0304006-24B

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	k040807	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 4/8/03	
		Date of Extraction: 4/1/03	

Compound	%Recovery
Phenol	69
2-Chlorophenol	68
1,4-Dichlorobenzene	64
N-Nitroso-di-n-propylamine	90
1,2,4-Trichlorobenzene	79
4-Chloro-3-methylphenol	85
Acenaphthene	78
4-Nitrophenol	67
2,4-Dinitrotoluene	77
Pentachlorophenol	73
Pyrene	90

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
2-Fluorophenol	59	50-150
Phenol-d5	70	50-150
Nitrobenzene-d5	78	50-150
2-Fluorobiphenyl	79	60-120
2,4,6-Tribromophenol	92	50-150
Terphenyl-d14	96	60-120

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CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice
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180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX: (916) 985-1020

Contact Person: Mike Susca
Company: IRC Environmental
Address: 5 Waterside Crossing City: Windsor State: CT Zip: 06095
Phone: (860) 298-6234 FAX: (860) 298-6399
Collected By: (Signature) Kate Lauriat

Project Info:
P.O. #:
Project #: 38182
Project Name: Stratia/Sawyer

Turn Around Time:
☐ Normal
☒ Rush SEE NOTES
Specify

Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested: Analysis	Analyses Requested: Bubble Rate (cc/min) Start / Finish	Canister Pressure / Vacuum: Initial (Start Time)	Final (Stop Time)	Receipt (mm Hg)
01A	SVP-10-SG-033103	3/31/03 ~ 1237	TO-13	148.5 / 145.3	1022	1237	135
02A	SVP-12-SG-033103	3/31/03 ~ 1258	TO-13	149.9 / 150.7	1043	1258	135
03A	SVP-15-SG-033103	3/31/03 ~ 1404	TO-13	150.2 / 149.8	1149	1404	135
04A	SVP-5-SG-033103	3/31/03 ~ 1415	TO-13	150.2 / 149.8	1200	1415	135
05A	SVP-11-SG-033103	3/31/03 ~ 1805	TO-13	148.5 / 145.3	1550	1805	135
06A	SVP-10-SG-033103	3/31/03 ~ 1851	TO-13	74.81 / 77.15	1421	1851	270
07A	SVP-100-SG-033103	3/31/03 ~ 1851	TO-13	75.75 / 76.35	1421	1851	270
08A	SVP-6-SG-033103	3/31/03 ~ 1745	TO-13	150.2 / 149.8	1530	1745	135
09A	SVP-9-SG-033103	3/31/03 ~ 1805	TO-13	154.4 / 154.4	1550	1805	135
10A	Background Sample 033103	3/31/03 ~ 1807	TO-13	150.5 / 153.3	1552	1807	135

Relinquished By: (Signature) Date/Time: Kate Lauriat 3/31/03
Received By: (Signature) Date/Time: Laurie Hamer ATL 4/1/03 9:15
Relinquished By: (Signature) Date/Time:
Received By: (Signature) Date/Time:
Relinquished By: (Signature) Date/Time:
Received By: (Signature) Date/Time:

Notes: 48 hr TAT on analysis
Standard TAT on report
* TO-13 refer to analyte list previously submitted.

Lab Use Only	Shipper Name	Air Bill #	Opened By	Temp. (°C)	Condition	Custody Seals Intact?	Work Order #
	FedEx	8334 5504 3530	TJ	Ambient	Questionable	(Yes) No None	0304006

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180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX: (916) 985-1020

Contact Person: Gary Ritter
Company: TRC
Address: 5 Waterside Crossing City: Windsor State: CT Zip: 06095
Phone: 860-298-6256 FAX: 860-298-6380
Collected By: Signature: Dennis P. Ryder

Project Info:
P.O. #:
Project #: 38182
Project Name: Solutia

Turn Around Time:
☐ Normal
☒ Rush ____ Specify

Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested	Start / Finish Flow rate / cc min	Times Initial	Times Final	M.D.
11A	BBZ-Office-01	3/29/03	TO13	40.01 / 39.32	13:36	21:58	502
12A	BBZ-Intake-02			40.25 / 40.18	13:30	21:53	503
13A	BBG-Office-03			40.67 / 40.11	13:16	21:29	493
14A	BBG-Intake-04			40.78 / 40.50	13:21	21:34	493
15A	CCB-Office-05			40.87 / 40.16	13:08	21:16	488
16A	CCB-Intake-06			40.35 / 40.07	12:39	21:11	512
17A	BK-1st Fl. Office-07			40.48 / 41.71	12:08	20:16	487
18A	BK-Intake-08			41.27 / 40.75	12:30	20:55	505
19A	BK-Dist-09			39.98 / 40.00	12:19	20:32	493
~~20A~~ 20A/21A	BK-Dist-Duplicate-10 Blank-11			39.86 / 39.67	12:20	20:37	497

Relinquished By: (Signature) Date/Time: Dennis P. Ryder 3/31/03 09:00 — Received By: (Signature) Date/Time:
Relinquished By: (Signature) Date/Time: — Received By: (Signature) Date/Time: [signature] ATL 4/1/03 930
Relinquished By: (Signature) Date/Time: — Received By: (Signature) Date/Time:

Notes: Sample: BK-Dist-Duplicate-10 Tip of sampling tube broke off during sampling.

Lab Use Only	Shipper Name	Air Bill #	Opened By:	Temp. (°C)	Condition	Custody Seals Intact?	Work Order #
	FedEx	8024622322	CA	Ambient	~~Good~~ Questionable	Yes No (None)	0304006
		44					

Form 1293 rev. 05

[initials] 4/1/03

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180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX: (916) 985-1020

CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice
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Contact Person Mike Susca
Company TRC Environmental
Address 5 Waterside Crossing City Windsor State CT Zip 06095
Phone (860)298-6234 FAX (860)298-6599
Collected By: Signature Kate Cannot

Project Info:
P.O. #
Project # 39182
Project Name Solutia/Sauget

Turn Around Time:
☐ Normal
☒ Rush ______ Specify

Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested	Canister Pressure / Vacuum Initial	Final	Receipt
~~01A~~ 22A	Trip Blank 033103	3/31/03 1830	TD-15 refer to analyte list already submitted	NA	NA	NA
23A	Trip Blank 033103	3/31/03 1835	TD-13 " "	NA	NA	NA

gz 4/1/03

Relinquished By: (Signature) Date/Time: Kate Cannot 3/31/03 1830
Received By: (Signature) Date/Time:
Relinquished By: (Signature) Date/Time:
Received By: (Signature) Date/Time:
Relinquished By: (Signature) Date/Time:
Received By: (Signature) Date/Time: Tami Bartek ATL 4/1/03 920

Notes:
48 hr TAT for analysis
Standard TAT for report

0304006

Lab Use Only	Shipper Name	Air Bill #	Opened By:	Temp. (°C)	Condition	Custody Seals Intact?	Work Order #
	FedEx	833450043508	TB	—	Good	(Yes) No None	~~0304003~~

Ambient Questionable
gz 4/1/03

Form 1293 rev. 09

gz 4/1/03

BOX 88AH31

2474-F41	Florida Power
2474-F61	Florida Power
Eh	Vendros Related Services
Ei	Professional Activities
Ej	Nuclear Relaed Regulations
	Model Evaluation & development
	Exhibit for deposition - W.Kawaters

TO-15

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Air Toxics Ltd. Introduces the Electronic Report

Thank you for choosing Air Toxics Ltd. To better serve our customers, we are providing your report by e-mail. This document is provided in Portable Document Format which can be viewed with Acrobat Reader by Adobe.

This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

(916) 985-1000 .FAX (916) 985-1020
Hours 8:00 A.M to 6:00 P.M. Pacific
E-mail to:samplereceiving@airtoxics.com

AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0308439

Work Order Summary

CLIENT:	Mr. Gary Ritter TRC Environmental Corporation 5 Waterside Crossing Windsor, CT 06095	**BILL TO:**	Mr. Gary Ritter TRC Environmental Corporation 5 Waterside Crossing Windsor, CT 06095
PHONE:	860 298-9692	**P.O. #**	
FAX:		**PROJECT #**	38182 Solutia/Sauget
DATE RECEIVED:	8/22/03	**CONTACT:**	Betty Chu
DATE COMPLETED:	9/4/03		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.
01A	Trip Blank 082103	Modified TO-15/TIC	29.0 "Hg
02A	FB082103 AM	Modified TO-15/TIC	10.0 "Hg
03A	SVP-17A-SG-082103	Modified TO-15/TIC	10.0 "Hg
04A	Lab Blank	Modified TO-15/TIC	NA
05A	CCV	Modified TO-15/TIC	NA
06A	LCS	Modified TO-15/TIC	NA

CERTIFIED BY: Linda D. Thomas DATE: 09/04/03

Laboratory Director

Certfication numbers: AR DEQ, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/03, Expiration date: 06/30/04
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified TO-15
TRC Environmental Corporation
Workorder# 0308439

Three 6 Liter Summa Canister samples were received on August 22, 2003. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.5 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

Requirement	*TO-15*	*ATL Modifications*
BFB acceptance criteria	CLP protocol	SW-846 protocol
Concentration of IS spike	10 ppbv	25 ppbv when 0.5/2.0 ppbv is used for the reporting limit
Dilutions for initial calibration	Dynamic dilutions or static using canisters	Syringe dilutions
Daily CCV	</= 30% Difference	</= 30% Difference with two allowed out up to </=40%.; flag and narrate outliers
Primary ions for Quantification	Freon 114: 85, Carbon Tetrachloride: 117, Trichloroethene: 130, Ethyl Benzene, m,p- and o-Xylene: 91	Freon 114: 135, Carbon Tetrachloride: 119, Trichloroethene: 95, Ethyl Benzene, m,p- and o-Xylene: 106

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

Specific analytes that are requested by the client to be reported as tentatively identified compounds (TICs) are determined by searching for each compound's characteristic spectra. If no chromatographic peak displaying the compound specific spectra exists, then the TIC is reported as not detected. Please note that the laboratory has not evaluated the stability of any heretofore tentatively identified compound in the vapor phase or for efficiency of recovery through the analytical system.

The reported CCV for each daily batch may be derived from more than one individual analytical file due to the client's request for non-standard compounds.

Non-standard compounds have different acceptance criteria than the TO14/15 compound list as per contract or verbal agreement.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated Peak.

Q - Exceeds quality control limits.
U - Compound analyzed for but not detected above the reporting limit.
UJ- Non-detected compound associated with low bias in the CCV
N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:
a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: Trip Blank 082103

ID#: 0308439-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d082208	Date of Collection:	8/21/03
Dil. Factor:	1.00	Date of Analysis:	8/22/03 03:53 PM

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.50	1.3	Not Detected	Not Detected
Methylene Chloride	0.50	1.8	Not Detected	Not Detected
1,1-Dichloroethane	0.50	2.0	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.50	2.0	Not Detected	Not Detected
Chloroform	0.50	2.5	Not Detected	Not Detected
1,1,1-Trichloroethane	0.50	2.8	Not Detected	Not Detected
Benzene	0.50	1.6	Not Detected	Not Detected
1,2-Dichloroethane	0.50	2.0	Not Detected	Not Detected
Trichloroethene	0.50	2.7	Not Detected	Not Detected
Tetrachloroethene	0.50	3.4	Not Detected	Not Detected
Chlorobenzene	0.50	2.3	Not Detected	Not Detected
alpha-Chlorotoluene	0.50	2.6	Not Detected	Not Detected
Acetone	2.0	4.8	Not Detected	Not Detected
Carbon Disulfide	2.0	6.3	Not Detected	Not Detected
trans-1,2-Dichloroethene	2.0	8.0	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	6.0	Not Detected	Not Detected
Bromodichloromethane	2.0	14	Not Detected	Not Detected
4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	2.0	8.3	Not Detected	Not Detected
Bromoform	2.0	21	Not Detected	Not Detected
tert-Butylbenzene	2.0	11	Not Detected	Not Detected
Naphthalene	10	53	Not Detected	Not Detected
1,2-Dichlorobenzene	0.50	3.0	Not Detected	Not Detected
1,4-Dichlorobenzene	0.50	3.0	Not Detected	Not Detected
Freon 134a	2.0	8.5	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Freon 134 [359-35-3]	359-35-3	NA	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	93	70-130

AIR TOXICS LTD.

SAMPLE NAME: FB082103 AM

ID#: 0308439-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**d082209**	**Date of Collection:**	**8/21/03**
Dil. Factor:	**2.01**	**Date of Analysis:**	**8/22/03 04:36 PM**

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	1.0	2.6	Not Detected	Not Detected
Methylene Chloride	1.0	3.5	Not Detected	Not Detected
1,1-Dichloroethane	1.0	4.1	Not Detected	Not Detected
cis-1,2-Dichloroethene	1.0	4.0	Not Detected	Not Detected
Chloroform	1.0	5.0	Not Detected	Not Detected
1,1,1-Trichloroethane	1.0	5.6	Not Detected	Not Detected
Benzene	1.0	3.3	Not Detected	Not Detected
1,2-Dichloroethane	1.0	4.1	Not Detected	Not Detected
Trichloroethene	1.0	5.5	Not Detected	Not Detected
Tetrachloroethene	1.0	6.9	Not Detected	Not Detected
Chlorobenzene	1.0	4.7	Not Detected	Not Detected
alpha-Chlorotoluene	1.0	5.3	Not Detected	Not Detected
Acetone	4.0	9.7	13	32
Carbon Disulfide	4.0	13	Not Detected	Not Detected
trans-1,2-Dichloroethene	4.0	16	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.0	12	Not Detected	Not Detected
Bromodichloromethane	4.0	27	Not Detected	Not Detected
4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	4.0	17	Not Detected	Not Detected
Bromoform	4.0	42	Not Detected	Not Detected
tert-Butylbenzene	4.0	22	Not Detected	Not Detected
Naphthalene	20	110	Not Detected	Not Detected
1,2-Dichlorobenzene	1.0	6.1	Not Detected	Not Detected
1,4-Dichlorobenzene	1.0	6.1	Not Detected	Not Detected
Freon 134a	4.0	17	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Freon 134 [359-35-3]	359-35-3	NA	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	93	70-130

AIR TOXICS LTD.

SAMPLE NAME: SVP-17A-SG-082103

ID#: 0308439-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d082210	Date of Collection:	8/21/03
Dil. Factor:	2.01	Date of Analysis:	8/22/03 05:20 PM

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	1.0	2.6	Not Detected	Not Detected
Methylene Chloride	1.0	3.5	Not Detected	Not Detected
1,1-Dichloroethane	1.0	4.1	Not Detected	Not Detected
cis-1,2-Dichloroethene	1.0	4.0	Not Detected	Not Detected
Chloroform	1.0	5.0	Not Detected	Not Detected
1,1,1-Trichloroethane	1.0	5.6	Not Detected	Not Detected
Benzene	1.0	3.3	10	33
1,2-Dichloroethane	1.0	4.1	Not Detected	Not Detected
Trichloroethene	1.0	5.5	Not Detected	Not Detected
Tetrachloroethene	1.0	6.9	Not Detected	Not Detected
Chlorobenzene	1.0	4.7	Not Detected	Not Detected
alpha-Chlorotoluene	1.0	5.3	Not Detected	Not Detected
Acetone	4.0	9.7	38	91
Carbon Disulfide	4.0	13	4.3	13
trans-1,2-Dichloroethene	4.0	16	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.0	12	13	39
Bromodichloromethane	4.0	27	Not Detected	Not Detected
4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	4.0	17	5.8	24
Bromoform	4.0	42	Not Detected	Not Detected
tert-Butylbenzene	4.0	22	Not Detected	Not Detected
Naphthalene	20	110	Not Detected	Not Detected
1,2-Dichlorobenzene	1.0	6.1	Not Detected	Not Detected
1,4-Dichlorobenzene	1.0	6.1	Not Detected	Not Detected
Freon 134a	4.0	17	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Freon 134 [359-35-3]	359-35-3	NA	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	94	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0308439-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d082206	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 8/22/03 12:36 PM	

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.50	1.3	Not Detected	Not Detected
Methylene Chloride	0.50	1.8	Not Detected	Not Detected
1,1-Dichloroethane	0.50	2.0	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.50	2.0	Not Detected	Not Detected
Chloroform	0.50	2.5	Not Detected	Not Detected
1,1,1-Trichloroethane	0.50	2.8	Not Detected	Not Detected
Benzene	0.50	1.6	Not Detected	Not Detected
1,2-Dichloroethane	0.50	2.0	Not Detected	Not Detected
Trichloroethene	0.50	2.7	Not Detected	Not Detected
Tetrachloroethene	0.50	3.4	Not Detected	Not Detected
Chlorobenzene	0.50	2.3	Not Detected	Not Detected
alpha-Chlorotoluene	0.50	2.6	Not Detected	Not Detected
Acetone	2.0	4.8	Not Detected	Not Detected
Carbon Disulfide	2.0	6.3	Not Detected	Not Detected
trans-1,2-Dichloroethene	2.0	8.0	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	6.0	Not Detected	Not Detected
Bromodichloromethane	2.0	14	Not Detected	Not Detected
4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	2.0	8.3	Not Detected	Not Detected
Bromoform	2.0	21	Not Detected	Not Detected
tert-Butylbenzene	2.0	11	Not Detected	Not Detected
Naphthalene	10	53	Not Detected	Not Detected
1,2-Dichlorobenzene	0.50	3.0	Not Detected	Not Detected
1,4-Dichlorobenzene	0.50	3.0	Not Detected	Not Detected
Freon 134a	2.0	8.5	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Freon 134 [359-35-3]	359-35-3	NA	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	94	70-130

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0308439-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d082203	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 8/22/03 10:11 AM	

Compound	%Recovery
Vinyl Chloride	86
Methylene Chloride	81
1,1-Dichloroethane	82
cis-1,2-Dichloroethene	87
Chloroform	89
1,1,1-Trichloroethane	97
Benzene	84
1,2-Dichloroethane	101
Trichloroethene	92
Tetrachloroethene	105
Chlorobenzene	95
alpha-Chlorotoluene	88
Acetone	84
Carbon Disulfide	81
trans-1,2-Dichloroethene	85
2-Butanone (Methyl Ethyl Ketone)	94
Bromodichloromethane	108
4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	104
Bromoform	128
tert-Butylbenzene	81
Naphthalene	84
1,2-Dichlorobenzene	93
1,4-Dichlorobenzene	96
Freon 134a	86

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Freon 134 [359-35-3]	359-35-3	NA	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	98	70-130

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0308439-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**d082204**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/22/03 11:08 AM**	

Compound	%Recovery
Vinyl Chloride	91
Methylene Chloride	77
1,1-Dichloroethane	74
cis-1,2-Dichloroethene	89
Chloroform	87
1,1,1-Trichloroethane	92
Benzene	90
1,2-Dichloroethane	103
Trichloroethene	96
Tetrachloroethene	112
Chlorobenzene	96
alpha-Chlorotoluene	86
Acetone	77
Carbon Disulfide	77
trans-1,2-Dichloroethene	86
2-Butanone (Methyl Ethyl Ketone)	88
Bromodichloromethane	92
4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	95
Bromoform	94
tert-Butylbenzene	Not Spiked
Naphthalene	Not Spiked
1,2-Dichlorobenzene	84
1,4-Dichlorobenzene	84
Freon 134a	Not Spiked

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Freon 134 [359-35-3]	359-35-3	NA	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	98	70-130

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AN ENVIRONMENTAL ANALYTICAL LABORATORY

CHAIN-OF-CUSTODY RECORD

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180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
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Contact Person: MIKE SUSCA
Company: TRC Environmental
Address: 5 Waterside Crossing City: Windsor State: CT Zip: 06095
Phone: (860) 298-6234 FAX: (860) 298-6399
Collected By: Signature: [signature]

Project info:
P.O. #:
Project #: 38182
Project Name: Solutia/Sauget

Turn Around Time:
☐ Normal
☒ Rush: See notes (Specify)
[initials] 8/22/03

Lab I.D.	Field Sample I.D.	Date & Time		Analyses Requested	Canister Pressure / Vacuum Initial	Final	Receipt
01A	Trip Blank 082103	8/21/03	0730	TO-15 refer to previously submitted analyte list	—	—	29.0"Hg
02A	FB082103 AM	8/21/03	0815	↓	29	9	10.0"Hg
03A	SVP-17A-SG-082103	8/21/03	0816	↓	29	9	10.0"Hg

Relinquished By: (Signature) Date/Time: [signature] 8/21/03 1100
Received By: (Signature) Date/Time: [signature] ATL 8/22/03 0945
Relinquished By: (Signature) Date/Time:
Received By: (Signature) Date/Time:
Relinquished By: (Signature) Date/Time:
Received By: (Signature) Date/Time:

Notes: 48hr TAT on analysis
Standard TAT on report (include data validation package)

Lab Use Only	Shipper Name	Air Bill #	Opened By	Temp. (°C)	Condition	Custody Seals Intact?	Work Order #
	FedEx	8272 6680 2079	[initials]	—	Good	Yes No (None)	0308439

Form 1293 rev. 09

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Thank you for choosing Air Toxics Ltd. To better serve our customers, we are providing your report by e-mail. This document is provided in Portable Document Format which can be viewed with Acrobat Reader by Adobe.

This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

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E-mail to:samplereceiving@airtoxics.com

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AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0308398

Work Order Summary

CLIENT:	Mr. Gary Ritter TRC Environmental Corporation 5 Waterside Crossing Windsor, CT 06095	**BILL TO:**	Mr. Gary Ritter TRC Environmental Corporation 5 Waterside Crossing Windsor, CT 06095
PHONE:	860 298-9692	**P.O. #**	
FAX:		**PROJECT #**	38182 Solutia/ Sauget
DATE RECEIVED:	8/21/03	**CONTACT:**	Betty Chu
DATE COMPLETED:	8/29/03		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.
01A	SVP-7A-SG-082003	Modified TO-15	9.5 "Hg
02A	SVP-13A-SG-082003	Modified TO-15	8.5 "Hg
03A	SVP-10-SG-082003	Modified TO-15	5.0 "Hg
04A	SVP-100-SG-082003	Modified TO-15	11.0 "Hg
05A	SVP-23-SG-082003	Modified TO-15	9.5 "Hg
06A	FB 082003 AM	Modified TO-15	9.5 "Hg
07A	TRIP BLANK 082003	Modified TO-15	29.0 "Hg
08A	FB 082003 PM	Modified TO-15	10.5 "Hg
08AA	FB 082003 PM Duplicate	Modified TO-15	10.5 "Hg
09A	Lab Blank	Modified TO-15	NA
09B	Lab Blank	Modified TO-15	NA
10A	CCV	Modified TO-15	NA
10B	CCV	Modified TO-15	NA
11A	LCS	Modified TO-15	NA
11B	LCS	Modified TO-15	NA

CERTIFIED BY: _____ DATE: 08/29/03

Laboratory Director

Certfication numbers: AR DEQ, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/03, Expiration date: 06/30/04
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified TO-15
TRC Environmental Corporation
Workorder# 0308398

Eight 6 Liter Summa Canister samples were received on August 21, 2003. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.5 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

Requirement	*TO-15*	*ATL Modifications*
BFB acceptance criteria	CLP protocol	SW-846 protocol
Concentration of IS spike	10 ppbv	25 ppbv when 0.5/2.0 ppbv is used for the reporting limit
Dilutions for initial calibration	Dynamic dilutions or static using canisters	Syringe dilutions
Daily CCV	</= 30% Difference	</= 30% Difference with two allowed out up to </=40%.; flag and narrate outliers
Primary ions for Quantification	Freon 114: 85, Carbon Tetrachloride: 117, Trichloroethene: 130, Ethyl Benzene, m,p- and o-Xylene: 91	Freon 114: 135, Carbon Tetrachloride: 119, Trichloroethene: 95, Ethyl Benzene, m,p- and o-Xylene: 106

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

Dilution was performed on sample SVP-13A-SG-082003 due to the presence of high level non-target species.

The reported CCV for each daily batch may be derived from more than one individual analytical file due to the client's request for non-standard compounds.

All samples were analyzed within a 72 hour holding time.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated Peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: SVP-7A-SG-082003

ID#: 0308398-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d082109	Date of Collection:	8/20/03
Dil. Factor:	19.6	Date of Analysis:	8/21/03 04:28 PM

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	9.8	25	Not Detected	Not Detected
Methylene Chloride	9.8	35	Not Detected	Not Detected
1,1-Dichloroethane	9.8	40	Not Detected	Not Detected
cis-1,2-Dichloroethene	9.8	39	Not Detected	Not Detected
Chloroform	9.8	49	Not Detected	Not Detected
1,1,1-Trichloroethane	9.8	54	Not Detected	Not Detected
Benzene	9.8	32	820	2700
1,2-Dichloroethane	9.8	40	Not Detected	Not Detected
Trichloroethene	9.8	54	Not Detected	Not Detected
Tetrachloroethene	9.8	68	12	82
Chlorobenzene	9.8	46	760	3600
alpha-Chlorotoluene	9.8	52	Not Detected	Not Detected
Acetone	39	95	300	740
Carbon Disulfide	39	120	180	560
trans-1,2-Dichloroethene	39	160	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	39	120	66	200
Bromodichloromethane	39	270	Not Detected	Not Detected
4-Methyl-2-pentanone	39	160	230	980
Bromoform	39	410	Not Detected	Not Detected
tert-Butylbenzene	39	220	Not Detected	Not Detected
Naphthalene	200	1000	Not Detected	Not Detected
1,2-Dichlorobenzene	9.8	60	970	5900
1,4-Dichlorobenzene	9.8	60	2200	14000
Freon 134a	39	170	250	1000

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Freon 134 [359-35-3]	359-35-3	NA	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	108	70-130

AIR TOXICS LTD.

SAMPLE NAME: SVP-13A-SG-082003

ID#: 0308398-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d082126	Date of Collection:	8/20/03
Dil. Factor:	2.49	Date of Analysis:	8/22/03 08:02 AM

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	1.2	3.2	6.8	18
Methylene Chloride	1.2	4.4	Not Detected	Not Detected
1,1-Dichloroethane	1.2	5.1	Not Detected	Not Detected
cis-1,2-Dichloroethene	1.2	5.0	37	150
Chloroform	1.2	6.2	18	88
1,1,1-Trichloroethane	1.2	6.9	Not Detected	Not Detected
Benzene	1.2	4.0	22	72
1,2-Dichloroethane	1.2	5.1	Not Detected	Not Detected
Trichloroethene	1.2	6.8	36	200
Tetrachloroethene	1.2	8.6	81	560
Chlorobenzene	1.2	5.8	39	180
alpha-Chlorotoluene	1.2	6.6	Not Detected	Not Detected
Acetone	5.0	12	28	66
Carbon Disulfide	5.0	16	86	270
trans-1,2-Dichloroethene	5.0	20	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	5.0	15	5.7	17
Bromodichloromethane	5.0	34	Not Detected	Not Detected
4-Methyl-2-pentanone	5.0	21	Not Detected	Not Detected
Bromoform	5.0	52	Not Detected	Not Detected
tert-Butylbenzene	5.0	28	Not Detected	Not Detected
Naphthalene	25	130	Not Detected	Not Detected
1,2-Dichlorobenzene	1.2	7.6	4.8	29
1,4-Dichlorobenzene	1.2	7.6	10	62
Freon 134a	5.0	21	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Freon 134 [359-35-3]	359-35-3	NA	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	101	70-130

AIR TOXICS LTD.

SAMPLE NAME: SVP-10-SG-082003

ID#: 0308398-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**d082207**	**Date of Collection:**	**8/20/03**
Dil. Factor:	**215**	**Date of Analysis:**	**8/22/03 01:40 PM**

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	110	280	Not Detected	Not Detected
Methylene Chloride	110	380	Not Detected	Not Detected
1,1-Dichloroethane	110	440	Not Detected	Not Detected
cis-1,2-Dichloroethene	110	430	Not Detected	Not Detected
Chloroform	110	530	Not Detected	Not Detected
1,1,1-Trichloroethane	110	600	Not Detected	Not Detected
Benzene	110	350	Not Detected	Not Detected
1,2-Dichloroethane	110	440	Not Detected	Not Detected
Trichloroethene	110	590	Not Detected	Not Detected
Tetrachloroethene	110	740	Not Detected	Not Detected
Chlorobenzene	110	500	Not Detected	Not Detected
alpha-Chlorotoluene	110	560	Not Detected	Not Detected
Acetone	430	1000	Not Detected	Not Detected
Carbon Disulfide	430	1400	Not Detected	Not Detected
trans-1,2-Dichloroethene	430	1700	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	430	1300	Not Detected	Not Detected
Bromodichloromethane	430	2900	Not Detected	Not Detected
4-Methyl-2-pentanone	430	1800	Not Detected	Not Detected
Bromoform	430	4500	Not Detected	Not Detected
tert-Butylbenzene	430	2400	Not Detected	Not Detected
Naphthalene	2200	11000	Not Detected	Not Detected
1,2-Dichlorobenzene	110	660	Not Detected	Not Detected
1,4-Dichlorobenzene	110	660	Not Detected	Not Detected
Freon 134a	430	1800	25000	110000

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Freon 134 [359-35-3]	359-35-3	NA	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	92	70-130

AIR TOXICS LTD.

SAMPLE NAME: SVP-100-SG-082003

ID#: 0308398-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d082112	Date of Collection:	8/20/03
Dil. Factor:	424	Date of Analysis:	8/21/03 06:37 PM

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	210	550	Not Detected	Not Detected
Methylene Chloride	210	750	Not Detected	Not Detected
1,1-Dichloroethane	210	870	Not Detected	Not Detected
cis-1,2-Dichloroethene	210	850	Not Detected	Not Detected
Chloroform	210	1000	Not Detected	Not Detected
1,1,1-Trichloroethane	210	1200	Not Detected	Not Detected
Benzene	210	690	1600	5200
1,2-Dichloroethane	210	870	Not Detected	Not Detected
Trichloroethene	210	1200	Not Detected	Not Detected
Tetrachloroethene	210	1500	Not Detected	Not Detected
Chlorobenzene	210	990	61000	290000
alpha-Chlorotoluene	210	1100	Not Detected	Not Detected
Acetone	850	2000	Not Detected	Not Detected
Carbon Disulfide	850	2700	Not Detected	Not Detected
trans-1,2-Dichloroethene	850	3400	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	850	2500	Not Detected	Not Detected
Bromodichloromethane	850	5800	Not Detected	Not Detected
4-Methyl-2-pentanone	850	3500	Not Detected	Not Detected
Bromoform	850	8900	Not Detected	Not Detected
tert-Butylbenzene	850	4700	Not Detected	Not Detected
Naphthalene	4200	22000	Not Detected	Not Detected
1,2-Dichlorobenzene	210	1300	2600	16000
1,4-Dichlorobenzene	210	1300	14000	83000
Freon 134a	850	3600	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Freon 134 [359-35-3]	359-35-3	NA	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	96	70-130

AIR TOXICS LTD.

SAMPLE NAME: SVP-23-SG-082003

ID#: 0308398-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d082113	Date of Collection:	8/20/03
Dil. Factor:	1.96	Date of Analysis:	8/21/03 07:19 PM

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.98	2.5	Not Detected	Not Detected
Methylene Chloride	0.98	3.5	Not Detected	Not Detected
1,1-Dichloroethane	0.98	4.0	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.98	3.9	Not Detected	Not Detected
Chloroform	0.98	4.9	Not Detected	Not Detected
1,1,1-Trichloroethane	0.98	5.4	Not Detected	Not Detected
Benzene	0.98	3.2	1.3	4.3
1,2-Dichloroethane	0.98	4.0	Not Detected	Not Detected
Trichloroethene	0.98	5.4	Not Detected	Not Detected
Tetrachloroethene	0.98	6.8	Not Detected	Not Detected
Chlorobenzene	0.98	4.6	1.2	5.5
alpha-Chlorotoluene	0.98	5.2	Not Detected	Not Detected
Acetone	3.9	9.5	7.3	18
Carbon Disulfide	3.9	12	Not Detected	Not Detected
trans-1,2-Dichloroethene	3.9	16	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.9	12	Not Detected	Not Detected
Bromodichloromethane	3.9	27	Not Detected	Not Detected
4-Methyl-2-pentanone	3.9	16	Not Detected	Not Detected
Bromoform	3.9	41	Not Detected	Not Detected
tert-Butylbenzene	3.9	22	Not Detected	Not Detected
Naphthalene	20	100	Not Detected	Not Detected
1,2-Dichlorobenzene	0.98	6.0	Not Detected	Not Detected
1,4-Dichlorobenzene	0.98	6.0	Not Detected	Not Detected
Freon 134a	3.9	17	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Freon 134 [359-35-3]	359-35-3	NA	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	92	70-130

AIR TOXICS LTD.

SAMPLE NAME: FB 082003 AM

ID#: 0308398-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**d082114**	**Date of Collection:**	**8/20/03**
Dil. Factor:	**1.96**	**Date of Analysis:**	**8/21/03 08:02 PM**

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.98	2.5	Not Detected	Not Detected
Methylene Chloride	0.98	3.5	Not Detected	Not Detected
1,1-Dichloroethane	0.98	4.0	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.98	3.9	Not Detected	Not Detected
Chloroform	0.98	4.9	Not Detected	Not Detected
1,1,1-Trichloroethane	0.98	5.4	Not Detected	Not Detected
Benzene	0.98	3.2	Not Detected	Not Detected
1,2-Dichloroethane	0.98	4.0	Not Detected	Not Detected
Trichloroethene	0.98	5.4	3.3	18
Tetrachloroethene	0.98	6.8	Not Detected	Not Detected
Chlorobenzene	0.98	4.6	17	82
alpha-Chlorotoluene	0.98	5.2	Not Detected	Not Detected
Acetone	3.9	9.5	7.7	18
Carbon Disulfide	3.9	12	Not Detected	Not Detected
trans-1,2-Dichloroethene	3.9	16	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.9	12	Not Detected	Not Detected
Bromodichloromethane	3.9	27	Not Detected	Not Detected
4-Methyl-2-pentanone	3.9	16	Not Detected	Not Detected
Bromoform	3.9	41	Not Detected	Not Detected
tert-Bulylbenzene	3.9	22	Not Detected	Not Detected
Naphthalene	20	100	Not Detected	Not Detected
1,2-Dichlorobenzene	0.98	6.0	Not Detected	Not Detected
1,4-Dichlorobenzene	0.98	6.0	Not Detected	Not Detected
Freon 134a	3.9	17	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Freon 134 [359-35-3]	359-35-3	NA	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	94	70-130

AIR TOXICS LTD.

SAMPLE NAME: TRIP BLANK 082003

ID#: 0308398-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**d082115**	**Date of Collection:**	**8/20/03**
Dil. Factor:	**1.00**	**Date of Analysis:**	**8/21/03 08:46 PM**

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.50	1.3	Not Detected	Not Detected
Methylene Chloride	0.50	1.8	Not Detected	Not Detected
1,1-Dichloroethane	0.50	2.0	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.50	2.0	Not Detected	Not Detected
Chloroform	0.50	2.5	Not Detected	Not Detected
1,1,1-Trichloroethane	0.50	2.8	Not Detected	Not Detected
Benzene	0.50	1.6	Not Detected	Not Detected
1,2-Dichloroethane	0.50	2.0	Not Detected	Not Detected
Trichloroethene	0.50	2.7	Not Detected	Not Detected
Tetrachloroethene	0.50	3.4	Not Detected	Not Detected
Chlorobenzene	0.50	2.3	Not Detected	Not Detected
alpha-Chlorotoluene	0.50	2.6	Not Detected	Not Detected
Acetone	2.0	4.8	Not Detected	Not Detected
Carbon Disulfide	2.0	6.3	Not Detected	Not Detected
trans-1,2-Dichloroethene	2.0	8.0	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	6.0	Not Detected	Not Detected
Bromodichloromethane	2.0	14	Not Detected	Not Detected
4-Methyl-2-pentanone	2.0	8.3	Not Detected	Not Detected
Bromoform	2.0	21	Not Detected	Not Detected
tert-Butylbenzene	2.0	11	Not Detected	Not Detected
Naphthalene	10	53	Not Detected	Not Detected
1,2-Dichlorobenzene	0.50	3.0	Not Detected	Not Detected
1,4-Dichlorobenzene	0.50	3.0	Not Detected	Not Detected
Freon 134a	2.0	8.5	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Freon 134 [359-35-3]	359-35-3	NA	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	93	70-130

AIR TOXICS LTD.

SAMPLE NAME: FB 082003 PM

ID#: 0308398-08A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**d082116**	**Date of Collection:**	**8/20/03**
Dil. Factor:	**2.06**	**Date of Analysis:**	**8/21/03 09:29 PM**

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	1.0	2.7	Not Detected	Not Detected
Methylene Chloride	1.0	3.6	3.9	14
1,1-Dichloroethane	1.0	4.2	Not Detected	Not Detected
cis-1,2-Dichloroethene	1.0	4.2	Not Detected	Not Detected
Chloroform	1.0	5.1	Not Detected	Not Detected
1,1,1-Trichloroethane	1.0	5.7	Not Detected	Not Detected
Benzene	1.0	3.3	Not Detected	Not Detected
1,2-Dichloroethane	1.0	4.2	Not Detected	Not Detected
Trichloroethene	1.0	5.6	Not Detected	Not Detected
Tetrachloroethene	1.0	7.1	Not Detected	Not Detected
Chlorobenzene	1.0	4.8	Not Detected	Not Detected
alpha-Chlorotoluene	1.0	5.4	Not Detected	Not Detected
Acetone	4.1	9.9	7.7	18
Carbon Disulfide	4.1	13	Not Detected	Not Detected
trans-1,2-Dichloroethene	4.1	17	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.1	12	Not Detected	Not Detected
Bromodichloromethane	4.1	28	Not Detected	Not Detected
4-Methyl-2-pentanone	4.1	17	Not Detected	Not Detected
Bromoform	4.1	43	Not Detected	Not Detected
tert-Butylbenzene	4.1	23	Not Detected	Not Detected
Naphthalene	21	110	Not Detected	Not Detected
1,2-Dichlorobenzene	1.0	6.3	Not Detected	Not Detected
1,4-Dichlorobenzene	1.0	6.3	3.2	20
Freon 134a	4.1	17	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Freon 134 [359-35-3]	359-35-3	NA	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	93	70-130

AIR TOXICS LTD.

SAMPLE NAME: FB 082003 PM Duplicate

ID#: 0308398-08AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**d082117**	**Date of Collection:**	**8/20/03**
Dil. Factor:	**2.06**	**Date of Analysis:**	**8/21/03 10:12 PM**

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	1.0	2.7	Not Detected	Not Detected
Methylene Chloride	1.0	3.6	3.9	14
1,1-Dichloroethane	1.0	4.2	Not Detected	Not Detected
cis-1,2-Dichloroethene	1.0	4.2	Not Detected	Not Detected
Chloroform	1.0	5.1	Not Detected	Not Detected
1,1,1-Trichloroethane	1.0	5.7	Not Detected	Not Detected
Benzene	1.0	3.3	Not Detected	Not Detected
1,2-Dichloroethane	1.0	4.2	Not Detected	Not Detected
Trichloroethene	1.0	5.6	Not Detected	Not Detected
Tetrachloroethene	1.0	7.1	Not Detected	Not Detected
Chlorobenzene	1.0	4.8	Not Detected	Not Detected
alpha-Chlorotoluene	1.0	5.4	Not Detected	Not Detected
Acetone	4.1	9.9	7.9	19
Carbon Disulfide	4.1	13	Not Detected	Not Detected
trans-1,2-Dichloroethene	4.1	17	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.1	12	Not Detected	Not Detected
Bromodichloromethane	4.1	28	Not Detected	Not Detected
4-Methyl-2-pentanone	4.1	17	Not Detected	Not Detected
Bromoform	4.1	43	Not Detected	Not Detected
tert-Butylbenzene	4.1	23	Not Detected	Not Detected
Naphthalene	21	110	Not Detected	Not Detected
1,2-Dichlorobenzene	1.0	6.3	Not Detected	Not Detected
1,4-Dichlorobenzene	1.0	6.3	3.1	19
Freon 134a	4.1	17	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Freon 134 [359-35-3]	359-35-3	NA	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	94	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0308398-09A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d082105	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 8/21/03 11:21 AM	

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.50	1.3	Not Detected	Not Detected
Methylene Chloride	0.50	1.8	Not Detected	Not Detected
1,1-Dichloroethane	0.50	2.0	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.50	2.0	Not Detected	Not Detected
Chloroform	0.50	2.5	Not Detected	Not Detected
1,1,1-Trichloroethane	0.50	2.8	Not Detected	Not Detected
Benzene	0.50	1.6	Not Detected	Not Detected
1,2-Dichloroethane	0.50	2.0	Not Detected	Not Detected
Trichloroethene	0.50	2.7	Not Detected	Not Detected
Tetrachloroethene	0.50	3.4	Not Detected	Not Detected
Chlorobenzene	0.50	2.3	Not Detected	Not Detected
alpha-Chlorotoluene	0.50	2.6	Not Detected	Not Detected
Acetone	2.0	4.8	Not Detected	Not Detected
Carbon Disulfide	2.0	6.3	Not Detected	Not Detected
trans-1,2-Dichloroethene	2.0	8.0	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	6.0	Not Detected	Not Detected
Bromodichloromethane	2.0	14	Not Detected	Not Detected
4-Methyl-2-pentanone	2.0	8.3	Not Detected	Not Detected
Bromoform	2.0	21	Not Detected	Not Detected
tert-Butylbenzene	2.0	11	Not Detected	Not Detected
Naphthalene	10	53	Not Detected	Not Detected
1,2-Dichlorobenzene	0.50	3.0	Not Detected	Not Detected
1,4-Dichlorobenzene	0.50	3.0	Not Detected	Not Detected
Freon 134a	2.0	8.5	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Freon 134 [359-35-3]	359-35-3	NA	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	94	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0308398-09B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d082206	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 8/22/03 12:36 PM	

Compound	Rpt. Limit (ppbv)	Rpt. Limit (uG/m3)	Amount (ppbv)	Amount (uG/m3)
Vinyl Chloride	0.50	1.3	Not Detected	Not Detected
Methylene Chloride	0.50	1.8	Not Detected	Not Detected
1,1-Dichloroethane	0.50	2.0	Not Detected	Not Detected
cis-1,2-Dichloroethene	0.50	2.0	Not Detected	Not Detected
Chloroform	0.50	2.5	Not Detected	Not Detected
1,1,1-Trichloroethane	0.50	2.8	Not Detected	Not Detected
Benzene	0.50	1.6	Not Detected	Not Detected
1,2-Dichloroethane	0.50	2.0	Not Detected	Not Detected
Trichloroethene	0.50	2.7	Not Detected	Not Detected
Tetrachloroethene	0.50	3.4	Not Detected	Not Detected
Chlorobenzene	0.50	2.3	Not Detected	Not Detected
alpha-Chlorotoluene	0.50	2.6	Not Detected	Not Detected
Acetone	2.0	4.8	Not Detected	Not Detected
Carbon Disulfide	2.0	6.3	Not Detected	Not Detected
trans-1,2-Dichloroethene	2.0	8.0	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	6.0	Not Detected	Not Detected
Bromodichloromethane	2.0	14	Not Detected	Not Detected
4-Methyl-2-pentanone	2.0	8.3	Not Detected	Not Detected
Bromoform	2.0	21	Not Detected	Not Detected
tert-Butylbenzene	2.0	11	Not Detected	Not Detected
Naphthalene	10	53	Not Detected	Not Detected
1,2-Dichlorobenzene	0.50	3.0	Not Detected	Not Detected
1,4-Dichlorobenzene	0.50	3.0	Not Detected	Not Detected
Freon 134a	2.0	8.5	Not Detected	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Freon 134 [359-35-3]	359-35-3	NA	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	94	70-130

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0308398-10A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d082102	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 8/21/03 08:48 AM	

Compound	%Recovery
Vinyl Chloride	84
Methylene Chloride	80
1,1-Dichloroethane	83
cis-1,2-Dichloroethene	89
Chloroform	90
1,1,1-Trichloroethane	97
Benzene	86
1,2-Dichloroethane	103
Trichloroethene	92
Tetrachloroethene	103
Chlorobenzene	94
alpha-Chlorotoluene	88
Acetone	85
Carbon Disulfide	79
trans-1,2-Dichloroethene	84
2-Butanone (Methyl Ethyl Ketone)	95
Bromodichloromethane	109
4-Methyl-2-pentanone	106
Bromoform	127
tert-Butylbenzene	79
Naphthalene	83
1,2-Dichlorobenzene	92
1,4-Dichlorobenzene	95
Freon 134a	83

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Freon 134 [359-35-3]	359-35-3	NA	Not Spiked

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	97	70-130

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0308398-10B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d082203	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 8/22/03 10:11 AM	

Compound	%Recovery
Vinyl Chloride	86
Methylene Chloride	81
1,1-Dichloroethane	82
cis-1,2-Dichloroethene	87
Chloroform	89
1,1,1-Trichloroethane	97
Benzene	84
1,2-Dichloroethane	101
Trichloroethene	92
Tetrachloroethene	105
Chlorobenzene	95
alpha-Chlorotoluene	88
Acetone	84
Carbon Disulfide	81
trans-1,2-Dichloroethene	85
2-Butanone (Methyl Ethyl Ketone)	94
Bromodichloromethane	108
4-Methyl-2-pentanone	104
Bromoform	128
tert-Butylbenzene	81
Naphthalene	84
1,2-Dichlorobenzene	93
1,4-Dichlorobenzene	96
Freon 134a	86

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Freon 134 [359-35-3]	359-35-3	NA	Not Spiked

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	98	70-130

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0308398-11A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d082103	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 8/21/03 09:59 AM	

Compound	%Recovery
Vinyl Chloride	96
Methylene Chloride	80
1,1-Dichloroethane	76
cis-1,2-Dichloroethene	91
Chloroform	90
1,1,1-Trichloroethane	94
Benzene	91
1,2-Dichloroethane	105
Trichloroethene	96
Tetrachloroethene	113
Chlorobenzene	96
alpha-Chlorotoluene	90
Acetone	80
Carbon Disulfide	79
trans-1,2-Dichloroethene	88
2-Butanone (Methyl Ethyl Ketone)	92
Bromodichloromethane	92
4-Methyl-2-pentanone	96
Bromoform	94
tert-Butylbenzene	Not Spiked
Naphthalene	Not Spiked
1,2-Dichlorobenzene	86
1,4-Dichlorobenzene	86
Freon 134a	Not Spiked

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Freon 134 [359-35-3]	359-35-3	NA	Not Spiked

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	97	70-130

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0308398-11B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	d082204	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 8/22/03 11:08 AM	

Compound	%Recovery
Vinyl Chloride	91
Methylene Chloride	77
1,1-Dichloroethane	74
cis-1,2-Dichloroethene	89
Chloroform	87
1,1,1-Trichloroethane	92
Benzene	90
1,2-Dichloroethane	103
Trichloroethene	96
Tetrachloroethene	112
Chlorobenzene	96
alpha-Chlorotoluene	86
Acetone	77
Carbon Disulfide	77
trans-1,2-Dichloroethene	86
2-Butanone (Methyl Ethyl Ketone)	88
Bromodichloromethane	92
4-Methyl-2-pentanone	95
Bromoform	94
tert-Butylbenzene	Not Spiked
Naphthalene	Not Spiked
1,2-Dichlorobenzene	84
1,4-Dichlorobenzene	84
Freon 134a	Not Spiked

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Freon 134 [359-35-3]	359-35-3	NA	Not Spiked

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	98	70-130

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AN ENVIRONMENTAL ANALYTICAL LABORATORY

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Contact Person: MIKE BUSCA
Company: TRC Environmental
Address: 5 WATERSIDE CROSSING City: WINDSOR State: CT Zip: 06095
Phone: (860)298-6234 FAX: (860)298-6399
Collected By: Signature: [signature]

Project Info:
P.O. #:
Project #: 58182
Project Name: Solutia/Sanger

Turn Around Time:
☐ Normal
☒ Rush SEE NOTE
Specify

MW 8/21/03

Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested	Canister Pressure / Vacuum Initial	Final	Receipt
01A	SVP-7A-SG-082003	8/20/03 0908	TO-15 - Refer to analyte list previously submitted	25.5	5.5	9.5"Hg
02A	SVP-13A-SG-082003	0924	"	28.5	8	8.5"Hg
03A	SVP-10-SG-082003	1011	"	29.5	5	5.0"Hg
04A	SVP-10D-SG-082003	1011	"	26	7	11.0"Hg

Relinquished By: (Signature) Date/Time: [signature] 8/20/03 1425
Received By: (Signature) Date/Time:
Relinquished By: (Signature) Date/Time:
Received By: (Signature) Date/Time:
Relinquished By: (Signature) Date/Time:
Received By: (Signature) Date/Time: [signature] 8/21/03 0900

Notes:
48 hr TAT on Analysis
Standard TAT on data packing (including data val. package)

Lab Use Only	Shipper Name	Air Bill #	Opened By	Temp. (°C)	Condition	Custody Seals Intact?	Work Order #
	FedEx	827266802296	CA	—	good	Yes No (None)	0308398

Form 293 rev. 08

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Company: TRC Environmental
Address: 5 Waterside Crossing City: Windsor State: CT Zip: 06095
Phone: (860) 298-6234 FAX: (860) 298-6399
Collected By: Signature: Patti Cauriat

Project Info:
P.O. #:
Project #: 38182
Project Name:

Turn Around Time:
☐ Normal
☒ Rush SEE NOTES
Specify

MW 8/21/03

Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested	Canister Pressure / Vacuum Initial	Final	Receipt
05A	SVP-23-SG-082003	8/20/03 1913	TO-15 refer to previously submitted analyte list	27	6	9.5"Hg
06A	FB082003 AM	1922	" "	29	8.5	9.5"Hg
07A	Trip Blank 082003	1415	" "	NA	NA	29.0"Hg
08A	FB082003 PM	1310	" "	27.5	8	10-5"Hg

Relinquished By: (Signature) Date/Time: Patti Cauriat 8/20/03 1420
Received By: (Signature) Date/Time:
Relinquished By: (Signature) Date/Time:
Received By: (Signature) Date/Time:
Relinquished By: (Signature) Date/Time:
Received By: (Signature) Date/Time: 8/21/03 1000

Notes: 48 TAT on analyses
Standard TAT on report (include data validation package)

Lab Use Only
Shipper Name: FedEx Air Bill #: 827266802285 Opened By: CA Temp. (°C): — Condition: Good Custody Seals Intact? Yes No None
Work Order #: 0308398

Form 1295 rev. 09

TO-13

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This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

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E-mail to:samplereceiving@airtoxics.com

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AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0308437

Work Order Summary

CLIENT:	Mr. Gary Ritter TRC Environmental Corporation 5 Waterside Crossing Windsor, CT 06095	**BILL TO:**	Mr. Gary Ritter TRC Environmental Corporation 5 Waterside Crossing Windsor, CT 06095
PHONE:	860 298-9692	**P.O. #**	
FAX:		**PROJECT #**	38182 Solutia/Sauget
DATE RECEIVED:	8/22/03	**CONTACT:**	Betty Chu
DATE COMPLETED:	9/5/03		

FRACTION #	NAME	TEST
01A	Trip Blank 082103	Modified TO-13A/TIC
02A	FB082103 AM	Modified TO-13A/TIC
03A	SVP-17A-SG-082103	Modified TO-13A/TIC
04A	Lab Blank	Modified TO-13A/TIC
05A	LCS	Modified TO-13A/TIC

CERTIFIED BY: _____ DATE: 09/05/03

Laboratory Director

Certfication numbers: AR DEQ, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/03, Expiration date: 06/30/04
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
Modified TO-13A
TRC Environmental Corporation
Workorder# 0308437

Three XAD Tube samples were received on August 22, 2003. The laboratory performed the analysis for polycyclic aromatic hydrocarbons in air by modified EPA Method TO-13A. The XAD sample cartridges were extracted using soxhlet extraction with methylene chloride. The sample extract was then concentrated to 1.0 mL and analyzed by GC/MS in the full scan mode. Duplicate extraction cannot be performed on XAD media, therefore duplicate results are derived from analyzing the extract twice.

Method modifications taken to run these samples include:

Requirement	*TO-13A*	*ATL Modifications*
Extraction Solvent	10% ether in hexane for PUF; DCM for XAD sorbent. Final extract in hexane.	DCM for PUF/XAD cartridge and XAD sorbent. Final extract in DCM.
Glassware Cleaning	Muffle furnace is utilized.	Solvent cleaning procedure is used.
Extraction technique	Soxhlet extraction	Soxhlet extraction or pressurized fluid extraction
Reporting list	19 PAHs	Coronene and perylene performed by client request only.
Calibration range	0.10 to 2.5 ug/mL	1.0 ug/mL to 160 ug/mL
Field surrogates	Deuterated PAHs are spiked on media prior to sampling.	Performed by client request only.
Solvent Process Blank	Required each analytical batch.	Not performed; each solvent lot is certified prior to use.
Retention time for Internal Standards	RT window is defined by the most recent ICAL internal standards.	RT window is defined by the CCV internal standards.
Compound Identification	Relative RT must be +/-0.01 unit of ICAL or CCV.	RT window of +/-0.06 min is used.
Continuing Calibration Verification	Minimum RRF 0.1-1.3.	Minimum RRF criteria is met for ICAL. CCV recovery criteria is 70-130%.
Method Blank	<MDL	<Reporting Limit

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

Specific analytes that are requested by the client to be reported as tentatively identified compounds (TICs) are determined by searching for each compound's characteristic spectra. If no chromatographic peak displaying the compound specific spectra exists, then the TIC is reported as not detected. Please note that the laboratory has not evaluated the stability of any heretofore tentatively identified compound in the vapor phase or for efficiency of recovery through the analytical system.

The client requested an abbreviated target analyte list. The associated LCS's were spiked with representative compounds as per the method.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:
E - Exceeds instrument calibration range.
Q - Exceeds quality control limits.
S - Saturated peak.
J - Estimated value.
B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).
U - Compound analyzed for but not detected above the reporting limit.
N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:
a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: Trip Blank 082103

ID#: 0308437-01A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	**k082608**	**Date of Collection:**	**8/21/03**
Dil. Factor:	**1.00**	**Date of Analysis:**	**8/26/03 01:47 PM**
		Date of Extraction:	**8/22/03**

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	81	50-150
Phenol-d5	82	50-150
Nitrobenzene-d5	85	50-150
2-Fluorobiphenyl	84	60-120
2,4,6-Tribromophenol	81	50-150
Terphenyl-d14	89	60-120

AIR TOXICS LTD.

SAMPLE NAME: FB082103 AM

ID#: 0308437-02A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	**k082609**	**Date of Collection:**	**8/21/03**
Dil. Factor:	**1.00**	**Date of Analysis:**	**8/26/03 02:19 PM**
		Date of Extraction:	**8/22/03**

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	72	50-150
Phenol-d5	73	50-150
Nitrobenzene-d5	74	50-150
2-Fluorobiphenyl	76	60-120
2,4,6-Tribromophenol	79	50-150
Terphenyl-d14	89	60-120

AIR TOXICS LTD.

SAMPLE NAME: SVP-17A-SG-082103

ID#: 0308437-03A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	k082610	Date of Collection:	8/21/03
Dil. Factor:	1.00	Date of Analysis:	8/26/03 02:52 PM
		Date of Extraction:	8/22/03

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	72	50-150
Phenol-d5	70	50-150
Nitrobenzene-d5	72	50-150
2-Fluorobiphenyl	72	60-120
2,4,6-Tribromophenol	79	50-150
Terphenyl-d14	85	60-120

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0308437-04A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	**k082606**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/26/03 12:42 PM**	
		Date of Extraction: 8/22/03	

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
2-Fluorophenol	77	50-150
Phenol-d5	76	50-150
Nitrobenzene-d5	78	50-150
2-Fluorobiphenyl	79	60-120
2,4,6-Tribromophenol	74	50-150
Terphenyl-d14	85	60-120

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0308437-05A

MODIFIED EPA METHOD TO-13 GC/MS FULL SCAN

File Name:	k082607	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 8/26/03 01:14 PM	
		Date of Extraction: 8/22/03	

Compound	%Recovery
Phenol	73
2-Chlorophenol	73
1,4-Dichlorobenzene	69
N-Nitroso-di-n-propylamine	74
1,2,4-Trichlorobenzene	75
4-Chloro-3-methylphenol	78
Acenaphthene	73
4-Nitrophenol	77
2,4-Dinitrotoluene	76
Pentachlorophenol	68
Pyrene	81

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
2-Fluorophenol	76	50-150
Phenol-d5	74	50-150
Nitrobenzene-d5	85	50-150
2-Fluorobiphenyl	83	50-150
2,4,6-Tribromophenol	86	50-150
Terphenyl-d14	88	50-150

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CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice

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180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX: (916) 985-1020

Contact Person: Mike Susca
Company: TRC Environmental
Address: 5 Waterside Crossing City: Windsor State: CT Zip: 06095
Phone: (860) 298-6234 FAX: (860) 298-6399
Collected By: (Signature) Kate Lawrat

Project Info:
P.O. #: [redacted]
Project #: 38182
Project Name: Solutia/Sauget

Turn Around Time:
☐ Normal
☒ Rush: See note
Specify

Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested (Pump Cal. Start / Finish)	Canister Pressure / Vacuum Initial	Final	Receipt
01A	Trip Blank 082103	8/21/03 0745	TO-13	—	—	—
02A	FB082103 AM	8/21/03	TO-13 149.6 / 154.4	30.15	10.25	1.35
03A	SVP-17A-SG1-082103	8/21/03	TO-13 150.8 / 153.5	30.15	10.25	1.35

Relinquished By: (Signature) Date/Time: Kate Lawrat 8/21/03 1155
Received By: (Signature) Date/Time: FTL 8/22/03 945
Relinquished By: (Signature) Date/Time:
Received By: (Signature) Date/Time:
Relinquished By: (Signature) Date/Time:
Received By: (Signature) Date/Time:

Notes: 48 hr. TAT on analysis
Standard TAT on report (include data validation package)

Lab Use Only

Shipper Name	Air Bill #	Opened By:	Temp. (°C)	Condition	Custody Seals Intact?	Work Order #
FedEx	8272 6690 2274	JD	10.4	Good	Yes No (None)	0308437

Form 1296 rev. 09

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This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

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WORK ORDER #: 0308375

Work Order Summary

CLIENT:	Mr. Gary Ritter TRC Environmental Corporation 5 Waterside Crossing Windsor, CT 06095	**BILL TO:**	Mr. Gary Ritter TRC Environmental Corporation 5 Waterside Crossing Windsor, CT 06095
PHONE:	860 298-9692	**P.O. #**	
FAX:		**PROJECT #**	38182 Solutia/Sauget
DATE RECEIVED:	8/20/03	**CONTACT:**	Karen Perez
DATE COMPLETED:	9/2/03		

FRACTION #	NAME	TEST
01A	FB081903	Modified TO-13A/TIC
02A	Trip Blank 081903	Modified TO-13A/TIC
03A	SVP-3-SG-081903	Modified TO-13A/TIC
04A	SVP-9-SG-081903	Modified TO-13A/TIC
05A	SVP-14-SG-081903	Modified TO-13A/TIC
06A	Lab Blank	Modified TO-13A/TIC
07A	LCS	Modified TO-13A/TIC

CERTIFIED BY: Linda A. Freeman DATE: 09/02/03

Laboratory Director

Certfication numbers: AR DEQ, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892 .
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/03, Expiration date: 06/30/04
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
Modified TO-13A
TRC Environmental Corporation
Workorder# 0308375

Five XAD VOST Tube samples were received on August 20, 2003. The laboratory performed the analysis for polycyclic aromatic hydrocarbons in air by modified EPA Method TO-13A. The XAD sample cartridges were extracted using soxhlet extraction with methylene chloride. The sample extract was then concentrated to 1.0 mL and analyzed by GC/MS in the full scan mode. See the data sheets for the reporting limits for each compound. Duplicate extraction cannot be performed on XAD media, therefore duplicate results are derived from analyzing the extract twice.

Method modifications taken to run these samples include:

Requirement	*TO-13A*	*ATL Modifications*
Extraction Solvent	Use of PUF only requires use of 10% ether in hexane; separate extraction of filter in DCM. Use of XAD only requires use of DCM; extract filter with XAD.	Use PUF/XAD-2 cartridge; extract cartridge + filter together in DCM.
Glassware Cleaning	Cleaning series consisting of rinsing glassware with last solvent, acetone, hexane, water/detergent, DI H2O, muffle furnace @400 deg for 4 hrs.	Pre-soak in a 5 % Chem-Solv solution at least once per week, a water/detergent wash, soaking in tap water for at least 1 hr, and a DI H2O rinse. Glassware is then set to dry or rinsed with Methanol. Glassware is pre-rinsed with DCM prior to use.
Extract Cleanup	Elute extract through silica gel prior to analysis.	No clean up used, experience shows that step does not improve method performance for typical air samples.
Surrogate Concentration	1.0 ug final concentration.	50 ug final concentration for full scan, 2.0 ug for SIM.
Standard Preparation	Standards prepared in Hexane.	Standards prepared in Methylene Chloride.
Surrogate Recovery Limit	60 - 120%	50-150% for (non-PAH) surrogates that are not included in TO-13A

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

Specific analytes that are requested by the client to be reported as tentatively identified compounds (TICs) are determined by searching for each compound's characteristic spectra. If no chromatographic peak displaying the compound specific spectra exists, then the TIC is reported as not detected. Please note that the laboratory has not evaluated the stability of any heretofore tentatively identified compound in the vapor phase or for efficiency of recovery through the analytical system.

The client requested an abbreviated target analyte list. The associated LCS's were spiked with representative compounds as per the method.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:
E - Exceeds instrument calibration range.
Q - Exceeds quality control limits.
S - Saturated peak.
J - Estimated value.
B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).
U - Compound analyzed for but not detected above the reporting limit.
N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:
a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: FB081903

ID#: 0308375-01A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	k082115	Date of Collection:	8/19/03
Dil. Factor:	1.00	Date of Analysis:	8/21/03 08:45 PM
		Date of Extraction:	8/20/03

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	76	50-150
Phenol-d5	78	50-150
Nitrobenzene-d5	77	50-150
2-Fluorobiphenyl	80	60-120
2,4,6-Tribromophenol	71	50-150
Terphenyl-d14	79	60-120

AIR TOXICS LTD.

SAMPLE NAME: Trip Blank 081903

ID#: 0308375-02A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	**k082116**	**Date of Collection:**	**8/19/03**
Dil. Factor:	**1.00**	**Date of Analysis:**	**8/21/03 09:16 PM**
		Date of Extraction:	**8/20/03**

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	80	50-150
Phenol-d5	81	50-150
Nitrobenzene-d5	84	50-150
2-Fluorobiphenyl	83	60-120
2,4,6-Tribromophenol	74	50-150
Terphenyl-d14	83	60-120

AIR TOXICS LTD.

SAMPLE NAME: SVP-3-SG-081903

ID#: 0308375-03A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	k062117	Date of Collection:	8/19/03
Dil. Factor:	1.00	Date of Analysis:	8/21/03 09:48 PM
		Date of Extraction:	8/20/03

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	70	50-150
Phenol-d5	70	50-150
Nitrobenzene-d5	69	50-150
2-Fluorobiphenyl	69	60-120
2,4,6-Tribromophenol	66	50-150
Terphenyl-d14	74	60-120

AIR TOXICS LTD.

SAMPLE NAME: SVP-9-SG-081903

ID#: 0308375-04A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	**k082118**	**Date of Collection:**	**8/19/03**
Dil. Factor:	**1.00**	**Date of Analysis:**	**8/21/03 10:20 PM**
		Date of Extraction:	**8/20/03**

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	72	50-150
Phenol-d5	75	50-150
Nitrobenzene-d5	79	50-150
2-Fluorobiphenyl	81	60-120
2,4,6-Tribromophenol	65	50-150
Terphenyl-d14	80	60-120

AIR TOXICS LTD.

SAMPLE NAME: SVP-14-SG-081903

ID#: 0308375-05A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	k082119	Date of Collection:	8/19/03
Dil. Factor:	1.00	Date of Analysis:	8/21/03 10:52 PM
		Date of Extraction:	8/20/03

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	78	50-150
Phenol-d5	80	50-150
Nitrobenzene-d5	83	50-150
2-Fluorobiphenyl	84	60-120
2,4,6-Tribromophenol	75	50-150
Terphenyl-d14	83	60-120

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0308375-06A

MODIFIED EPA METHOD TO-13 GC/MS FULL SCAN

File Name:	k082113	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 8/21/03 07:41 PM	
		Date of Extraction: 8/20/03	

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
1,4-Dichlorobenzene	1.0	Not Detected
N-Nitroso-di-n-propylamine	1.0	Not Detected
1,2,4-Trichlorobenzene	1.0	Not Detected
4-Chloro-3-methylphenol	5.0	Not Detected
Acenaphthene	1.0	Not Detected
4-Nitrophenol	20	Not Detected
2,4-Dinitrotoluene	5.0	Not Detected
Pentachlorophenol	20	Not Detected
Pyrene	1.0	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
2-Fluorophenol	67	50-150
Phenol-d5	68	50-150
Nitrobenzene-d5	65	50-150
2-Fluorobiphenyl	69	50-150
2,4,6-Tribromophenol	64	50-150
Terphenyl-d14	68	50-150

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0308375-07A

MODIFIED EPA METHOD TO-13 GC/MS FULL SCAN

File Name:	k082114	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 8/21/03 08:13 PM	
		Date of Extraction: 8/20/03	

Compound	%Recovery
Phenol	70
2-Chlorophenol	70
1,4-Dichlorobenzene	67
N-Nitroso-di-n-propylamine	72
1,2,4-Trichlorobenzene	69
4-Chloro-3-methylphenol	75
Acenaphthene	71
4-Nitrophenol	77
2,4-Dinitrotoluene	72
Pentachlorophenol	64
Pyrene	78

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
2-Fluorophenol	72	50-150
Phenol-d5	70	50-150
Nitrobenzene-d5	78	50-150
2-Fluorobiphenyl	79	50-150
2,4,6-Tribromophenol	76	50-150
Terphenyl-d14	81	50-150

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AN ENVIRONMENTAL ANALYTICAL LABORATORY

CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice
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180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1600 FAX: (916) 985-1020

Contact Person: MIKE SUSCA
Company: TRC Environmental
Address: 5 WATERSIDE CROSSING City: Windsor State: CT Zip: 06095
Phone: (860) 298-6254 FAX: (860) 298-6399
Collected By: Signature

Project Info:
P.O. #
Project # 38182
Project Name: Solutia/ Sauget

Turn Around Time:
☐ Normal
☒ Rush Seventy-two Specify

Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested (Bulk Calibration: Start / Finish)	Canister Pressure / Vacuum: Initial (Start Time)	Final (Stop Time)	Receipt (Date)
01A	FB-081903	8/19/03 1426	TO-13 149.4 / 156.0	12.11	1426	135
02A	Trip Blank 081903	8/19/03 1640	" NA	NA	NA	NA
03A	SVP-3-SG-081903	8/19/03 1423	" 151.3 / 150.5	1208	1423	135
04A	SVP-9-SG-081903	8/19/03 1711	" 149.4 / 156.0	1456	1711	135
05A	SVP-14-SG-081903	8/19/03 1720	" 151.3 / 150.5	1505	1720	135

Relinquished By: (Signature) Date/Time: Kate Laurent 8/19/03 1755
Received By: (Signature) Date/Time: ATL 8/20/03 935
Relinquished By: (Signature) Date/Time
Received By: (Signature) Date/Time
Relinquished By: (Signature) Date/Time
Received By: (Signature) Date/Time

Notes: 48 hr. TAT on Analysis
Standard TAT on report (include data validation package)

Lab Use Only	Shipper Name	Air Bill #	Opened By:	Temp. (°C)	Condition	Custody Seals Intact?	Work Order #
	FedEx	827268802311	[illegible]	2.8	Good	Yes No (None)	0308375

Form 1553 rev 03

AIR TOXICS LTD.

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Air Toxics Ltd. Introduces the Electronic Report

Thank you for choosing Air Toxics Ltd. To better serve our customers, we are providing your report by e-mail. This document is provided in Portable Document Format which can be viewed with Acrobat Reader by Adobe.

This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

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E-mail to:samplereceiving@airtoxics.com

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AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0308403

Work Order Summary

CLIENT:	Mr. Gary Ritter TRC Environmental Corporation 5 Waterside Crossing Windsor, CT 06095	**BILL TO:**	Mr. Gary Ritter TRC Environmental Corporation 5 Waterside Crossing Windsor, CT 06095
PHONE:	860 298-9692	**P.O. #**	
FAX:		**PROJECT #**	38182 Solutia/Sauget
DATE RECEIVED:	8/21/03	**CONTACT:**	Betty Chu
DATE COMPLETED:	9/4/03		

FRACTION #	NAME	TEST
01A	SVP-7A-SG-082003	Modified TO-13A/TIC
01AA	SVP-7A-SG-082003 Duplicate	Modified TO-13A/TIC
02A	SVP-10-SG-082003	Modified TO-13A/TIC
03A	SVP-13A-SG-082003	Modified TO-13A/TIC
04A	SVP-23-SG-082003	Modified TO-13A/TIC
05A	SVP-100-SG-082003	Modified TO-13A/TIC
06A	FB082003 AM	Modified TO-13A/TIC
07A	Trip Blank 082003	Modified TO-13A/TIC
08A	FB082003 PM	Modified TO-13A/TIC
09A	Lab Blank	Modified TO-13A/TIC
10A	LCS	Modified TO-13A/TIC

CERTIFIED BY: _____ DATE: 09/04/03

Laboratory Director

Certfication numbers: AR DEQ, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/03, Expiration date: 06/30/04
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified TO-13A
TRC Environmental Corporation
Workorder# 0308403

Eight XAD Tube samples were received on August 21, 2003. The laboratory performed the analysis for polycyclic aromatic hydrocarbons in air by modified EPA Method TO-13A. The XAD sample cartridges were extracted using soxhlet extraction with methylene chloride. The sample extract was then concentrated to 1.0 mL and analyzed by GC/MS in the full scan mode. Duplicate extraction cannot be performed on XAD media, therefore duplicate results are derived from analyzing the extract twice.

Method modifications taken to run these samples include:

Requirement	*TO-13A*	*ATL Modifications*
Extraction Solvent	10% ether in hexane for PUF; DCM for XAD sorbent. Final extract in hexane.	DCM for PUF/XAD cartridge and XAD sorbent. Final extract in DCM.
Glassware Cleaning	Muffle furnace is utilized.	Solvent cleaning procedure is used.
Extraction technique	Soxhlet extraction	Soxhlet extraction or pressurized fluid extraction
Reporting list	19 PAHs	Coronene and perylene performed by client request only.
Calibration range	0.10 to 2.5 ug/mL	1.0 ug/mL to 160 ug/mL
Field surrogates	Deuterated PAHs are spiked on media prior to sampling.	Performed by client request only.
Solvent Process Blank	Required each analytical batch.	Not performed; each solvent lot is certified prior to use.
Retention time for Internal Standards	RT window is defined by the most recent ICAL internal standards.	RT window is defined by the CCV internal standards.
Compound Identification	Relative RT must be +/-0.01 unit of ICAL or CCV.	RT window of +/-0.06 min is used.
Continuing Calibration Verification	Minimum RRF 0.1-1.3.	Minimum RRF criteria is met for ICAL. CCV recovery criteria is 70-130%.
Method Blank	<MDL	<Reporting Limit

Receiving Notes

A Temperature Blank was included with in shipment. Temperature was measured and was not within 4 +/- 2 degrees C. Coolant in the form of ice/blue ice was present. The client was notified via the login fax/email and the analysis proceeded.

Analytical Notes

Specific analytes that are requested by the client to be reported as tentatively identified compounds (TICs) are determined by searching for each compound's characteristic spectra. If no chromatographic peak displaying the compound specific spectra exists, then the TIC is reported as not detected. Please note that the

laboratory has not evaluated the stability of any heretofore tentatively identified compound in the vapor phase or for efficiency of recovery through the analytical system.

Recoveries of surrogates 2-Fluorophenol and Phenol-d5 were outside specified control limits in sample SVP-100-SG-082003 due to matrix interference with internal standard 1,4-Dichlorobenzene-d4. Reanalysis confirmed the results. Associated compounds may be biased.

The client requested an abbreviated target analyte list. The associated LCS's were spiked with representative compounds as per the method.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:
E - Exceeds instrument calibration range.
Q - Exceeds quality control limits.
S - Saturated peak.
J - Estimated value.
B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).
U - Compound analyzed for but not detected above the reporting limit.
N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:
a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: SVP-7A-SG-082003

ID#: 0308403-01A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	k082319	Date of Collection:	8/20/03
Dil. Factor:	1.00	Date of Analysis:	8/23/03 07:05 PM
		Date of Extraction:	8/21/03

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	1.8
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	58	50-150
Phenol-d5	59	50-150
Nitrobenzene-d5	62	50-150
2-Fluorobiphenyl	65	60-120
2,4,6-Tribromophenol	77	50-150
Terphenyl-d14	81	60-120

AIR TOXICS LTD.

SAMPLE NAME: SVP-7A-SG-082003 Duplicate

ID#: 0308403-01AA

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	k082320	Date of Collection:	8/20/03
Dil. Factor:	1.00	Date of Analysis:	8/23/03 07:37 PM
		Date of Extraction:	8/21/03

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	1.7
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	57	50-150
Phenol-d5	58	50-150
Nitrobenzene-d5	63	50-150
2-Fluorobiphenyl	64	60-120
2,4,6-Tribromophenol	78	50-150
Terphenyl-d14	80	60-120

AIR TOXICS LTD.

SAMPLE NAME: SVP-10-SG-082003

ID#: 0308403-02A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	**k082321**	**Date of Collection:**	**8/20/03**
Dil. Factor:	**1.00**	**Date of Analysis:**	**8/23/03 08:09 PM**
		Date of Extraction:	**8/21/03**

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	52	50-150
Phenol-d5	53	50-150
Nitrobenzene-d5	72	50-150
2-Fluorobiphenyl	76	60-120
2,4,6-Tribromophenol	82	50-150
Terphenyl-d14	85	60-120

AIR TOXICS LTD.

SAMPLE NAME: SVP-13A-SG-082003

ID#: 0308403-03A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	k082322	Date of Collection:	8/20/03
Dil. Factor:	1.00	Date of Analysis:	8/23/03 08:41 PM
		Date of Extraction:	8/21/03

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	70	50-150
Phenol-d5	71	50-150
Nitrobenzene-d5	73	50-150
2-Fluorobiphenyl	72	60-120
2,4,6-Tribromophenol	75	50-150
Terphenyl-d14	83	60-120

AIR TOXICS LTD.

SAMPLE NAME: SVP-23-SG-082003

ID#: 0308403-04A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	k082323	Date of Collection:	8/20/03
Dil. Factor:	1.00	Date of Analysis:	8/23/03 09:13 PM
		Date of Extraction:	8/21/03

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	70	50-150
Phenol-d5	70	50-150
Nitrobenzene-d5	71	50-150
2-Fluorobiphenyl	72	60-120
2,4,6-Tribromophenol	79	50-150
Terphenyl-d14	84	60-120

AIR TOXICS LTD.

SAMPLE NAME: SVP-100-SG-082003

ID#: 0308403-05A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	k082517	Date of Collection:	8/20/03
Dil. Factor:	1.00	Date of Analysis:	8/25/03 05:48 PM
		Date of Extraction:	8/21/03

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Q = Exceeds Quality Control limits.

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	46 Q	50-150
Phenol-d5	48 Q	50-150
Nitrobenzene-d5	72	50-150
2-Fluorobiphenyl	68	60-120
2,4,6-Tribromophenol	81	50-150
Terphenyl-d14	84	60-120

AIR TOXICS LTD.

SAMPLE NAME: FB082003 AM

ID#: 0308403-06A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	k082518	Date of Collection:	8/20/03
Dil. Factor:	1.00	Date of Analysis:	8/25/03 06:21 PM
		Date of Extraction:	8/21/03

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	70	50-150
Phenol-d5	72	50-150
Nitrobenzene-d5	71	50-150
2-Fluorobiphenyl	72	60-120
2,4,6-Tribromophenol	83	50-150
Terphenyl-d14	84	60-120

AIR TOXICS LTD.

SAMPLE NAME: Trip Blank 082003

ID#: 0308403-07A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	**k082519**	**Date of Collection:**	**8/20/03**
Dil. Factor:	**1.00**	**Date of Analysis:**	**8/25/03 06:53 PM**
		Date of Extraction:	**8/21/03**

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	74	50-150
Phenol-d5	73	50-150
Nitrobenzene-d5	75	50-150
2-Fluorobiphenyl	76	60-120
2,4,6-Tribromophenol	84	50-150
Terphenyl-d14	86	60-120

AIR TOXICS LTD.

SAMPLE NAME: FB082003 PM

ID#: 0308403-08A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	**k082520**	**Date of Collection: 8/20/03**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/25/03 07:25 PM**	
		Date of Extraction: 8/21/03	

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: XAD Tube: VOST

Surrogates	%Recovery	Method Limits
2-Fluorophenol	74	50-150
Phenol-d5	75	50-150
Nitrobenzene-d5	76	50-150
2-Fluorobiphenyl	75	60-120
2,4,6-Tribromophenol	80	50-150
Terphenyl-d14	84	60-120

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0308403-09A

MODIFIED EPA METHOD TO-13A GC/MS FULL SCAN

File Name:	**k082317**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/23/03 06:00 PM**	
		Date of Extraction: 8/21/03	

Compound	Rpt. Limit (ug)	Amount (ug)
Phenol	5.0	Not Detected
2-Chlorophenol	5.0	Not Detected
Nitrobenzene	1.0	Not Detected
2,4-Dichlorophenol	5.0	Not Detected
2,4,5-Trichlorophenol	5.0	Not Detected
2,4,6-Trichlorophenol	5.0	Not Detected
4-Chloroaniline	10	Not Detected
Pentachlorophenol	20	Not Detected
Aniline	1.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ug)
4-Nitrochlorobenzene	100-00-5	NA	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
2-Fluorophenol	70	50-150
Phenol-d5	71	50-150
Nitrobenzene-d5	71	50-150
2-Fluorobiphenyl	72	60-120
2,4,6-Tribromophenol	80	50-150
Terphenyl-d14	84	60-120

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0308403-10A

MODIFIED EPA METHOD TO-13 GC/MS FULL SCAN

File Name:	k082318	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 8/23/03 06:32 PM	
		Date of Extraction: 8/21/03	

Compound	%Recovery
Phenol	68
2-Chlorophenol	70
1,4-Dichlorobenzene	67
N-Nitroso-di-n-propylamine	70
1,2,4-Trichlorobenzene	70
4-Chloro-3-methylphenol	74
Acenaphthene	70
4-Nitrophenol	78
2,4-Dinitrotoluene	75
Pentachlorophenol	66
Pyrene	81

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
2-Fluorophenol	71	50-150
Phenol-d5	70	50-150
Nitrobenzene-d5	78	50-150
2-Fluorobiphenyl	78	50-150
2,4,6-Tribromophenol	82	50-150
Terphenyl-d14	86	50-150

@ AIR TOXICS LTD.
AN ENVIRONMENTAL ANALYTICAL LABORATORY

CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice
Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

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FOLSOM, CA 95630-4719
(916) 985-1000 FAX: (916) 985-1020

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Contact Person MIKE SUSCA
Company TRC ENVIRONMENTAL
Address 5 WATERSIDE CROSSING City Windsor State CT Zip 06095
Phone (860)298-6234 FAX (860)298-6399
Collected By: Signature [signature]

Project Info:
P.O. #
Project # 38182
Project Name Solutia Sawyer

Turn Around Time:
☐ Normal
☒ Rush See Note — Specify

Lab I.D.	Field Sample I.D.	Date & Time		Analyses Requested (Pump Cal. Start / Finish)	Canister Pressure / Vacuum Initial (Start Time)	Final (Finish Time)	Receipt (Time)
01A	SVP-7A-SG-082003	8/20/03	1123	TO-13 149.8 / 152.6	0908	1123	135
02A	SVP-10-SG-082003		1445	~~75.59 / 72.49~~ ~~[illegible]~~	1015	1445	270
03A	SVP-13A-SG-082003		1140	149.9 / 155.0	0925	1140	135
04A	SVP-23-SG-082003		1159	153.1 / 155.7 ~~[illegible]~~	0913	1159	135 *
05A	SVP-100-SG-082003		1445	75.44 / 77.07	1015	1445	270
06A	FB082003 AM		1137	150.6 / 155.7	0922	1137	135
07A	Trip Blank 082003		1530	NA / NA	NA	NA	NA
08A	FB082003 PM		1513	150.6 / 155.7	1258	1513	135

Relinquished By: (Signature) Date/Time [signature] 8/20/03 1540 — Received By: (Signature) Date/Time [signature] Thomas ATL 8/21/03 1020
Relinquished By: (Signature) Date/Time — Received By: (Signature) Date/Time
Relinquished By: (Signature) Date/Time — Received By: (Signature) Date/Time

Notes: 48 hr TAT on analysis
Standard TAT on report, include data validation package.
* Changed pumps

Lab Use Only	Shipper Name	Air Bill #	Opened By:	Temp. (°C)	Condition	Custody Seals Intact?	Work Order #
	FedEx	8272 6680 2127	[initials]	10.0	Questionable	Yes No (None)	0308403

Form 1293 rev 03